Hastings District

Demographic Profile 1986-2031

Professor Natalie Jackson,
Director, NIDEA

New Zealand Regional Demographic Profiles 1986-2031. No. 1
November 2011

National Institute of Demographic and Economic Analysis
Te Rūnanga Tātari Tatauranga
THE UNIVERSITY OF WAIKATO

THE UNIVERSITY OF WAIKATO
Te Whare Wānanga o Waikato

Hastings District: Demographic Profile 1986-2031

Referencing information:

Jackson, N.O. (2011). Hastings District: Demographic Profile 1986-2031. *New Zealand Regional Demographic Profiles 1986-2031. No. 1*. University of Waikato. National Institute of Demographic and Economic Analysis.

ISSN 2324-5484 (Print)

ISSN 2324-5492 (Online)

Te Rūnanga Tātari Tatauranga | National Institute of Demographic and Economic Analysis
Te Whare Wānanga o Waikato | The University of Waikato
Private Bag 3105 | Hamilton 3240 | Waikato, New Zealand
Email: nojackso@waikato.ac.nz | visit us at: www.waikato.ac.nz/nidea/

Disclaimer

Table of Contents

EXECUTIVE SUMMARY

1. The population of Hastings has grown slowly but steadily over the past three decades, from just above 64,000 in 1986 to around 75,500 in 2011. It is projected to continue slow but steady growth throughout the projection period, reaching around 84,000 in 2031 (6.6 per cent above 2011). The trends are similar to, but at higher levels than for, the Hawke's Bay region, which is projected to increase by around 1.9 per cent. In both cases almost all growth is at 65+ years.
2. Hastings has a slightly smaller proportion of those of European/New Zealand/Other ethnicity than either the Hawke's Bay region or Total New Zealand, and a slightly larger proportion of both Māori and Pacific Island than the Hawke's Bay. Hastings also has proportionately fewer of Asian origin.
3. In all cases, the number in each ethnic group has grown, but substantially less so for the European/New Zealander/Other group, which actually declined slightly between 1996 and 2001. For Hastings this group grew overall by 3.4 per cent during the period 1996-2006, while the Māori population grew by 5.8 per cent, accounting for approximately 18 per cent of Hastings' growth. For the Hawke's Bay region, the European population grew by 0.7 per cent overall, against 4.3 per cent for Māori, who accounted for 26 per cent of the Hawke's Bay's growth.
4. The main component of Hastings's growth is natural increase. Net migration loss across the 1990s to 2001, again across 2006-09 and in 2010-11 partially offset that growth. The trends are similar for both the Hawke's Bay and Total New Zealand, although in the latter case net migration loss occurred only across the period 1998-2001.
5. Components of change by age (which are free of cohort size effects) show that most of Hastings's net migration loss between 1996 and 2006 was concentrated at 15-19 and 20-24 years of age. Hastings also saw small net migration gains at 5-14, 30-44, and 65-69 years across the period. The trends were similar for the Hawke's Bay region.
6. From a cross-sectional perspective (that is, change by age group rather than cohort), overall numbers for Hastings declined between 1996 and 2010 at 0-9 and 25-39 years, and increased at all older ages, most particularly across the Baby Boomer age groups. The trends are similar for Total Hawke's Bay (but the losses greater), while for Total New Zealand, net decline occurred at ages 5-9 and 30-34 years only. As noted these changes are partly due to cohort size effects.
7. As elsewhere, the population of Hastings is ageing. However like many 'rural' areas its ageing is being accelerated because sustained net migration loss at young adult ages has caused a deep bite to develop in the age structure across age 20-39 years. The minor gains at older ages also add to structural population ageing. The trends have been similar for the Hawke's Bay region.
8. The changes by age have important implications for the labour market. Hastings's Labour Market 'entry/exit ratio' (population aged 15-24 / 55-64 years) has fallen steadily since 1996, from 16.6 people at labour market entry age for every 10 in the retirement age zone, to just 11.3 in 2010. By comparison, Total New Zealand still has 13.2 people at entry age per 10 at exit age, while the Hawke's Bay Region, similar to Hastings, has 10.6 per 10. Of note is that if older age groupings are used, for example 20-29 and 60-69 years, Hastings in 2010 had 11.1 entrants per 10 exits, compared with 14.8 for Total New Zealand and 10.3 for Hawke's Bay. Again this is a reflection of the deeper bite in the age structures of Hastings and the Hawke's Bay at ages 20-34.
9. As elsewhere in New Zealand, the age structures of Hastings's major ethnic groups differ markedly, with the European/New Zealander/Other population relatively old and the Māori and

Pacific Island populations relatively young. The Asian population falls somewhere between, closer to the older age structure of European. There is a very strong correspondence between the overall bite in the age structure, and the age structure of the European population.

10. The very youthful age structure of Hastings's Māori population saw over one-third aged 0-14 years across the period 1996-2006. These proportions are in stark contrast to the Māori population's 22.0 per cent total population share and are clearly where the Māori population's contribution to Hastings's growth is concentrated. The data also indicate that Hastings's Māori population is slightly more youthful than its counterpart in the Hawke's Bay region, and much more so than Total New Zealand.
11. While the population is projected to grow across the projection period (medium assumptions), decline is projected at ages 0-24 and 40-54, offset by significant growth at 65+ years. Similar losses and gains by age are projected for the Hawke's Bay region. No losses at the younger ages are projected for Total New Zealand, although the gains are likely to be minimal, while those at some older ages are slightly lower than for both Hastings and the Hawke's Bay region.
12. Projections for Hastings by major ethnic group show the Māori population increasing between 2011 and 2021 by approximately 11.6 per cent, and the European/Other population by 1.0 per cent). There are, however, marked differences by age, with all age groups for Māori projected to increase substantially, and all age groups except 65+ years for the European/Other population by decline.
13. Data for the Hawke's Bay region suggest there will be relatively little overall change in the overall ethnic composition over time, but greater change by age. Young Māori, Pacific Island and Asian (0-14 years) are projected to slightly increase their share of the region's youthful population, while greater changes are evident for each successively older age group. In each case these result in a slightly diminished proportion of European.
14. The projections show Hastings's labour market entry / exit ratio falling below one (entrant per exit) between 2021 and 2026, depending on which age groupings are used. The trends are similar for Hawke's Bay and Total New Zealand, although for total New Zealand the ratio does not fall below one during the projection period.
15. The projections also show a rapid decline in Hastings's natural increase that has significant implications for future growth. The trend is driven by a cross-over to more elderly than children around 2026 (compared with 2021 for Hawke's Bay and 2026 for Total New Zealand), and a relatively small proportion projected to be at the key reproductive ages (21-22 per cent for both Hastings and Hawke's Bay) compared with 25-27 per cent for Total New Zealand.
16. A special topic section provides an overview of the Hawke's Bay region's changing industrial age structure across the 1996-2006 period, focussing on 18 industries which employ more than 1,000 people. Entry / exit ratios in key industries for the Hawke's Bay region are generally lower than for Total New Zealand and are declining at a faster rate, pointing to an urgent need to engage in succession planning, especially in the Government Administration and Marketing/Business Services industries.

What you need to know about these data

Data sources: All data used in this report have been sourced from Statistics New Zealand. Most have been accessed via Infoshare or Table Builder, while some have come from purchased, customised databases specially prepared for NIDEA by Statistics New Zealand. Because the data come from different collections and/or are aggregated in different ways, for example by ethnicity or labour force status, and small cell sizes have been rounded by Statistics New Zealand to protect individuals, they often generate different totals. While considerable care has been taken to ensure that such inter- and intra-collection discontinuities are acknowledged and accounted for, for example via footnotes to tables or in the text, the disparities are not usually large, and typically do not affect the story being told. The matter is drawn to the attention of readers who are often concerned when numbers which 'should' be the same, are not. The time-series data in Figures 1.1 and 1.2 are a particular case in point.

Ethnicity: The 'multiple count' method of enumerating the population by ethnic group is another case worthy of special note. The ethnic concept underlying data used in in this report is:

> *'the ethnic group or groups that people identify with or feel they belong to. Ethnicity is self-perceived and people can belong to more than one ethnic group. For example, people can identify with Māori ethnicity even though they may not be descended from a Māori ancestor. Conversely, people may choose to not identify with Māori ethnicity even though they are descended from a Māori ancestor'* (Statistics New Zealand 2011).

Counting people more than once makes analysis of the data and its interpretation particularly difficult. Some analysts prefer to calculate proportions based on the summed numbers in each ethnic group, which is the approach taken here, while others prefer to use the total population count as the denominator (eg., for a region). The problem with the latter method is that proportions sum to well over 100 per cent, making it difficult to interpret the resulting graphs. The approach in this paper has been to identify the extent of the 'over count'.

Residual method for estimating total net migration: This paper uses a residual method for estimating net migration. First, deaths for a given observation (eg one single year) are subtracted from births to give an estimate of natural increase. Second, the population at one observation is subtracted from the population at the previous observation, to give an estimate of net change between the two observations. Third, natural increase for that observation is subtracted from net change, to give the component due to net migration.

Residual method for estimating inter-censal migration by age and sex: A similar method is used for estimating net migration by age between two observations for which there are existing data (eg., 5 year census periods). First, numbers by age and sex for one observation are 'survived' based on the probability of surviving to the next age group. Second, known births are apportioned male/female according to the sex ratio (105 males / 100 females), and (using 5 year age group data) entered at age 0-4. Third, the survived numbers for each age/sex group are 'aged' by 5 years, to become the expected population for the next observation. Fourth, expected numbers for each age/sex group are subtracted from actual numbers at the next census, to derive an estimate of net migration for each age/sex.

Projections: The population projections used in this paper are in most cases based on Statistics New Zealand's medium set of assumptions, but comparison with the high and low variants have been included where useful. At national level the medium assumptions are that the total fertility rate (TFR) will decline from its present 2.1 births per woman to 1.9 births per woman by 2026; that life expectancy will continue to increase, but at a decelerating rate, and that annual net international migration will be 10,000 per year. International and internal migration at the subnational level is also accounted for, the assumptions reflecting observed net migration during each five-year period 1981-2006. The assumptions for Hastings are included at Appendix 3. When interpreting these data it is important to remind readers that demographic projections of future demand are not forecasts in the sense that they incorporate interventions that may change the demographic future. Rather, they simply indicate what future demand will be if the underlying assumptions regarding births, deaths, migration prevail.

Industry: The industry data used in the Special Topic (Section 6) are drawn from a time-series database developed by Statistics New Zealand to NIDEA specifications. They pertain to the employed population only. Data are given for three Census observations (1996, 2001 and 2006) and have been customised so that the industrial classification and geographic region is internally consistent across the period. The industrial classification is based on ANZSIC96 V4.1 at the three digit level. Aggregation by employment status (employer, self-employed, paid employee etc.,) is another case where the totals in this report may differ from those in other collections.

Feature Article – Population ageing in a nutshell

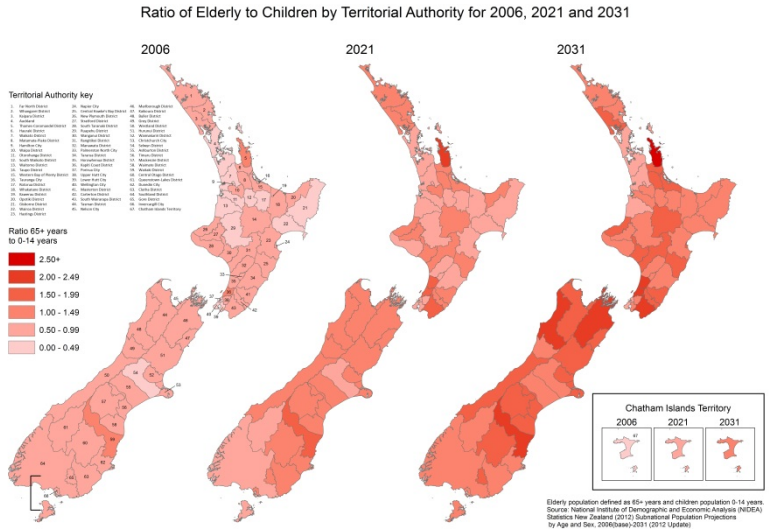
As elsewhere, population ageing is unfolding at markedly different rates across New Zealand. This diversity is caused by different mixes in the drivers of population ageing: birth rates, longevity (survivorship) and migration:

- Declining birth rates decrease the proportion of the population that is young and concomitantly increase the proportion at older ages.
- More people living longer adds to the numbers at older ages, and in the process further swells the proportion at those ages.
- When an area experiences net migration loss, which occurs mainly at 20-39 years, it removes both the young people themselves and their reproductive potential, further pushing up the median age.
- Where an area experiences net migration gains at retiree ages, both the numbers and proportions at those ages are further augmented, further accelerating structural ageing.

The overall outcome of these processes is an incremental—and in some cases rapid—shift to more elderly than children, more deaths than births, and to the end of growth and onset of what is expected to be permanent population decline, something not seen in modern populations until its recent onset in Japan and much of Europe.

Figure 1 provides an overview of the first of these trends (more elderly than children) at Territorial Authority level (TA). In 1996, no TA had more elderly than children. By 2003 that had become 3 TAs (4.5 per cent); by 2021 it is projected to be the case for 41 TAs (61.2 per cent); and by 2031, for 61 TAs (91.0) per cent.

Figure 1: Ratio of elderly (65+ years) to children (0-14 years), 2006, 2021 and 2031



As indicated, the process of population ageing generates two even more profound shifts: from natural increase, where births exceed deaths—as they have for all of New Zealand's modern history—to natural decline, where deaths exceed births; and from absolute growth to absolute decline, once there are insufficient migrants to offset the 'lost' births and increased deaths. In New Zealand, the shift to natural decline is not expected to occur nationally until the second half of the Century. However, the crossover is already occurring in three TAs (Waitaki, Thames Coromandel, and Horowhenua) and is projected to be the case in 22 TAs (30 per cent) by 2031.

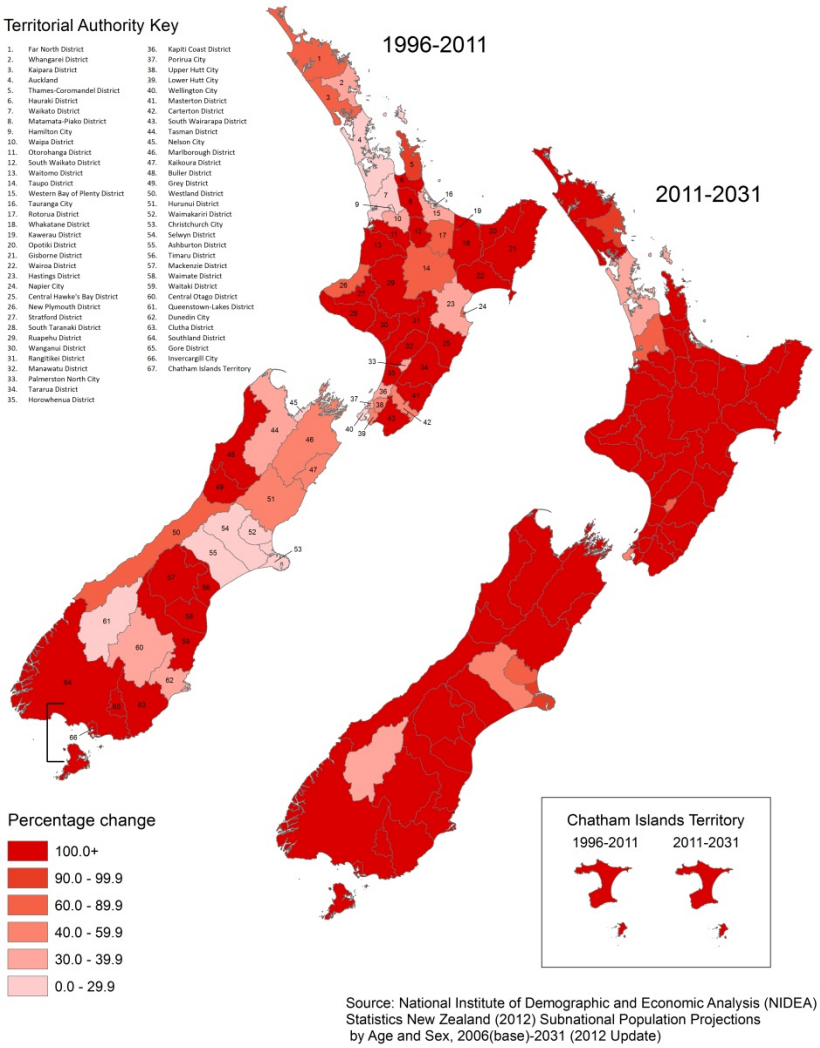
The final piece of jigsaw is a slow but equally inexorable shift from the 'old' form of population decline, which was caused by net migration loss that was greater than natural increase, to the 'new' form, where net migration loss is both accompanied by – and further contributes to – natural decline. Currently 24 (36 per cent) of New Zealand's TAs are declining in absolute terms, but only the three TAs noted above are yet experiencing the new (dual) form of decline. By 2031, the dual form is projected to be the case for seven TAs (10 per cent), alongside a further 15 TAs (22 per cent) experiencing decline from net migration loss only, and one experiencing decline from natural decline only. While it is still some way off for most TAs, the new form of population decline will be especially challenging because it will be self-reinforcing: ever-fewer young adults to bear the children, and ever-more elderly who have completed their childbearing years.

In the interim, it is critical to understand that for 56 TAs (84 per cent), all future 'growth' to 2031 will be at 65+ years (Figure 2)—and that in 23 of these TAs, that growth will be insufficient to offset overall decline at other ages. While the number declining will actually be one fewer than between 1996 and 2011 (due to a higher net migration assumption going forward), there will also be some

shift share effects, with six TAs coming marginally out of decline, and five entering it—meaning that in reality 29 TAs (43 per cent) are at the end of their growth stage.

Between 2011 and 2031, only eleven TAs are projected to see less than 100 per cent of their growth at 65+ years: Christchurch and Whangarei (each 95+ per cent at 65+ years), Waikato, Palmerston North City, and Waimakiriri (60-63 per cent), Wellington City, Selwyn and Tauranga City (44-46 per cent), and Auckland City, Hamilton City, and Queenstown (36-37 per cent). The trends are thus both pervasive and inexorable. At national level, they mean that two-thirds of growth will be at 65+ years, the underlying trends at subnational level concealed largely by Auckland.

Contribution to change by 65+ year old population by Territorial Authority,1996-2011 and 2011-2031



Source: National Institute of Demographic and Economic Analysis (NIDEA) Statistics New Zealand (2012) Subnational Population Projections by Age and Sex, 2006(base)-2031 (2012 Update)

To place New Zealand's situation in a global context, we can look at trends across the 58 More Developed Countries (MDCs) – of which New Zealand is one of the most youthful. Over the next 20 years, the population of the MDCs aged 65+ years will grow by around 98 million, while *all other age groups combined* will decline by 41 million. In anyone's language, those numbers will cause the scales to tip. Currently across the MDCs there is exactly one person aged 65+ years per child aged 0-14; by 2031 there will be 1.5. The shift is also unavoidable, because the 65+ population of 2031 is already 45+ years old. We know how many there are, and the rate at which they will die (and international migration at older ages is minimal). At the younger ages, only those aged less than 20 years are not yet born – but again we know approximately how many there will be in 2031 because we know how many people there will be at the key parenting ages (they are already teenagers) and we can be fairly certain that they are not going to return to having three or four children per woman as was the case during the baby boom (when their grandparents were born).

The global trends provide New Zealand with a salutary warning. The diminishing pool of youth in the other 57 OECD countries is the pool within which New Zealand competes for many of its skilled migrants. Increasing competition for these migrants will increasingly make it difficult for New Zealand to achieve the migration assumptions in the population projections drawn on above. Attention is increasingly being turned to the developing countries where there is still a significant excess supply of young people. However, attracting them to, and retaining them in New Zealand will require more attention to settlement issues and equity than is presently the case. As one of the youngest of the developed countries, those migrant whom New Zealand attracts *and trains* will be of ever-greater interest to our structurally older counterparts.

The following demographic profile for the Hastings Region should be read with this broad context in mind. The shift to the end of growth is a sequentially-unfolding phenomenon, with plenty of early warning signals. We can plot its course and plan ahead. However the clock is ticking and has been doing so for many years, as the retrospective elements of this profile will clearly identify. The crossing of any one of a handful of thresholds (see Box 1) by a TA means that it has entered the end of its growth phase. As indicated above, some regions may temporarily revert, but it is unlikely that they will resume significant or sustained growth.

These issues are being investigated more deeply by researchers at the National Institute of Demographic and Economic Analysis (NIDEA) and their colleagues at Massey University:

***Nga Tangata Oho Mairangi**: Regional Impacts of Demographic and Economic Change* – 2013-2014: MBIE-funded project led by Professor Paul Spoonley (Massey University) and Professor Jacques Poot (NIDEA). Key Researchers: Associate Professor Robin Pearce and Dr Trudi Cain (Massey University), Professor Natalie Jackson, Dr Dave Mare and Dr Michael Cameron (NIDEA).

Box 1: Key thresholds indicating end of growth phase

- Onset of youth deficit (proportion of population aged 15-24 years declines below 15 per cent)
- Fewer people at labour market 'entry' than 'exit' age (15-24: 55-64 years; 20-29: 60-69 years)
- More elderly than children (65+ : 0-14 years)
- Key reproductive age population declines below 15 per cent of the population
- More deaths than births (natural decline)
- Absolute decline

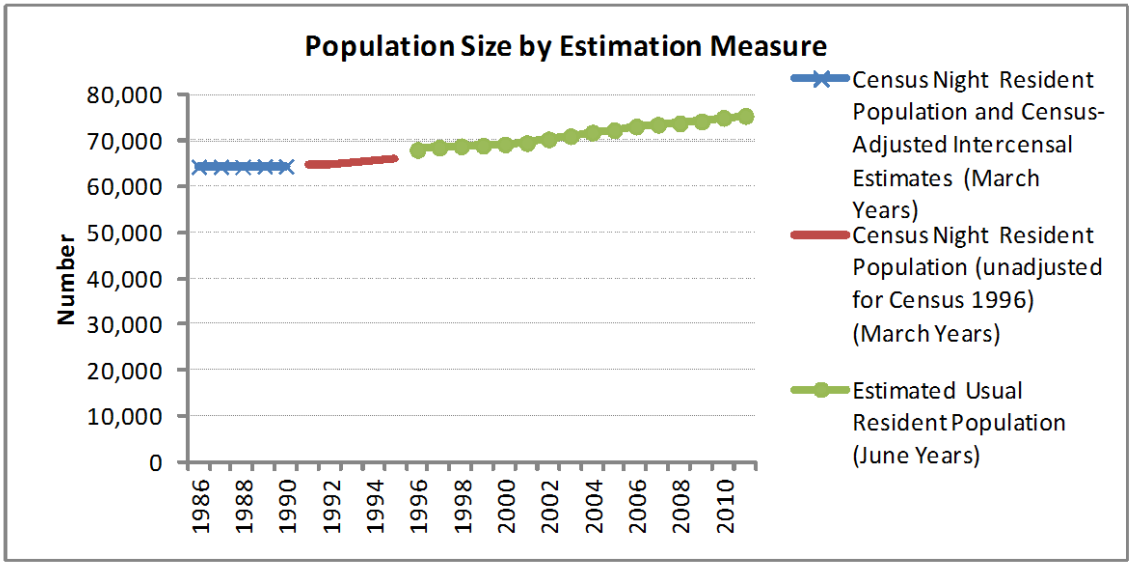
Professor Natalie Jackson

1.0 Population Trends

1.1 Population Size and Growth

The population of the Hastings District has grown slowly but steadily over the past three decades, from just above 64,000 in 1986 to around 75,500 in 2011 (Figure 1.1.1). Differences in the timing and methods of estimating population size across the period mean that the trends cannot be presented as continuous; however there is sufficient correspondence to indicate that steady growth has occurred since the 1990s (see Appendix 1.0 for underlying data).

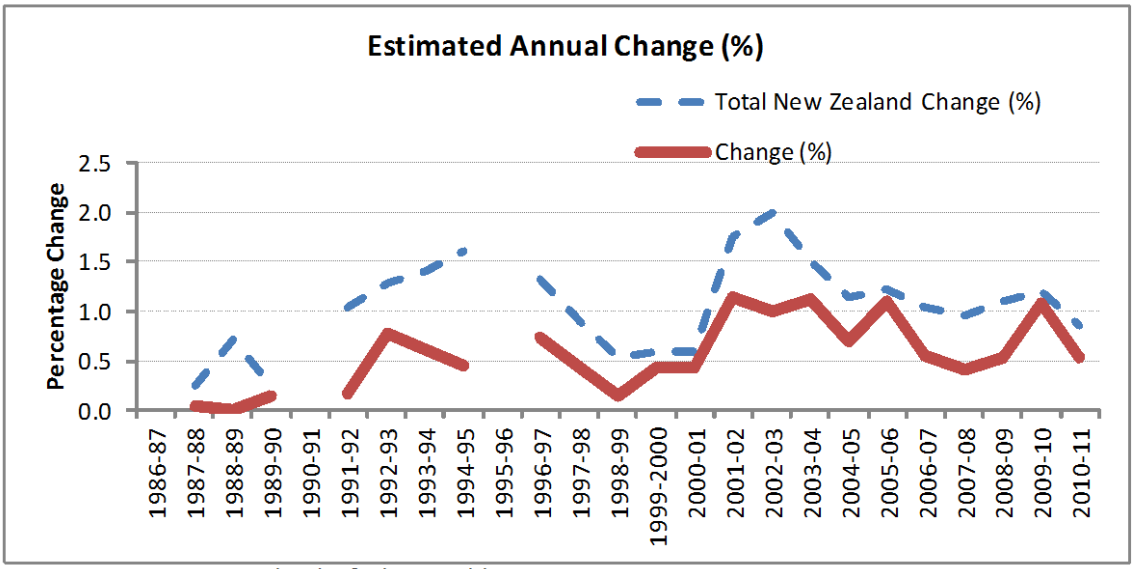
Figure 1.1.1: Population of Hastings District, 1986-2011



Source: Statistics New Zealand Infoshare, Tables DPE006AA; DPE051AA
Notes: Changes in the timing and method of estimating Resident Population between 1991-1992 and 1995-1996 mean that the three sets of trends should be understood as discontinuous

Figure 1.1.2 shows the trends in terms of annual growth rates, with the data collection discontinuities identified by gaps. Data are also compared with Total New Zealand. Growth for Hastings across this period has been steady but consistently at a lower rate than for Total New Zealand. However the perturbations have been remarkably similar for both (see Appendix 1.0 for data).

Figure 1.1.2: Annual Population Growth Rate, Hastings District and Total New Zealand, 1986-2011



Source: Statistics New Zealand Infoshare, Tables DPE006AA; DPE051AA

Notes: Changes in the timing and method of estimating Resident Population between 1991-1992 and 1995-1996 mean that the three sets of trends should be understood as discontinuous

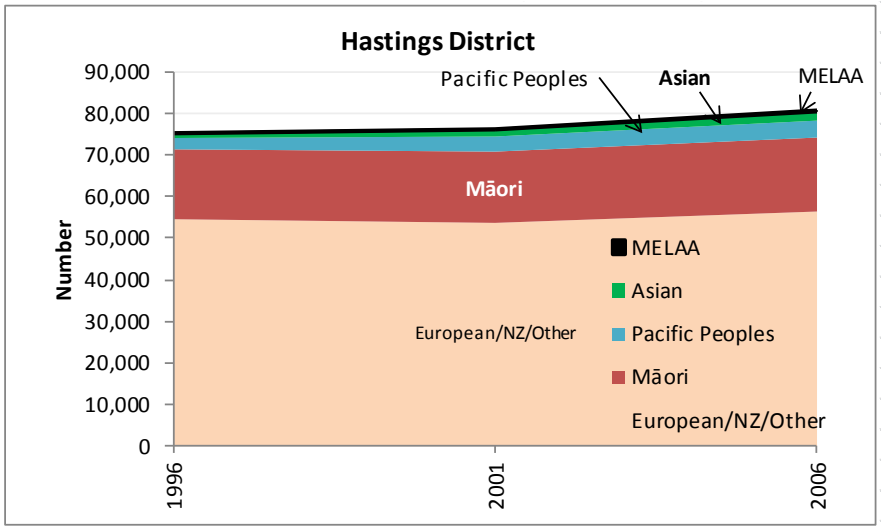
1.2 Ethnic Composition and Growth

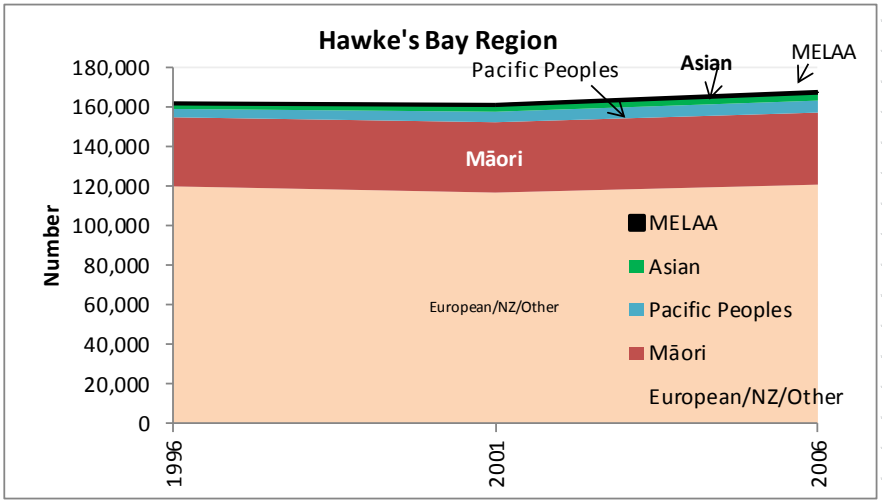
Figure 1.2.1 indicates the extent to which the major ethnic groups have contributed to the region's growth (see also Table 1.2.1). These 'multiple ethnic group' data[1] show that Hastings has a slightly smaller proportion of those of European/New Zealand/Other ethnicity (69.9 per cent) than either the Hawke's Bay region or Total New Zealand (70.2 and 71.0 per cent respectively), and a larger proportion of both Māori and Pacific Island people than Hawke's Bay. Proportionately, both Hastings and the Hawke's Bay region have substantially fewer people of Asian origin than Total New Zealand.

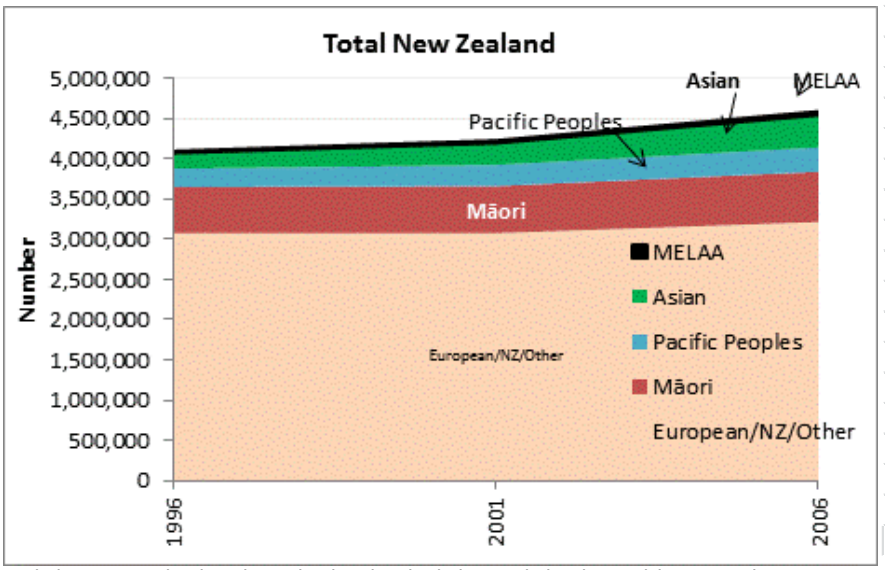
In all cases, the number in each ethnic group has grown, but substantially less so for the European/New Zealander/Other group. For Hastings this group grew by 3.4 per cent during the period 1996-2006 (declining between 1996 and 2001), and for the Hawke's Bay region, by 0.7per cent (Total NZ 4.5 per cent). The Māori populations of Hastings and the Hawke's Bay region grew by 5.8 and 4.3 per cent respectively, accounting for approximately 18 per cent of Hastings' growth and 26 per cent of the Hawke's Bay's (Table 1.2.2). Pacific Peoples also experienced significant growth, almost 50 per cent in the case of Hastings and 44 per cent for Hawke's Bay (Total NZ 32 per cent). The Asian-origin and Middle Eastern/Latin American/African (MELAA) populations of Hastings both doubled in size, their higher growth rates reflecting their relatively small base populations.

[1] The multiple ethnic group method of enumeration means that a proportion of people are counted more than once. Table 1.2.1 gives an approximation of the extent to which the method results in an over-count.

Figure 1.2.1: Population by Major Ethnic Group (Multiple Count), Hastings District, Hawke's Bay Region, and Total New Zealand 1996-2006







Statistics New Zealand, Estimated Subnational Ethnic Population (RC,TA) by Age and Sex at 30 June 1996, 2001 and 2006

*Notes: *People may be counted in more than one ethnic group*

Table 1.2.1: Population by Major Ethnic Group* (Multiple Count), Hastings District, Hawke's Bay Region, and Total New Zealand 1996-2006

Population by Major Ethnic Group (Multiple Count Ethnicity*), 1996, 2001, 2006

	1996	2001	2006	Change (%)	1996	2001	2006
	NUMBER				DISTRIBUTION (%)*		
Hastings District							
European/NZ/Other	54,530	53,650	56,380	3.4	72.4	70.4	69.9
Māori	16,790	17,120	17,770	5.8	22.3	22.5	22.0
Pacific Peoples	2,720	3,630	4,070	49.6	3.6	4.8	5.0
Asian	1,065	1,635	2,140	100.9	1.4	2.1	2.7
Middle Eastern/Latin American/African (MELA	165	170	355	115.2	0.2	0.2	0.4
TOTAL	75,270	76,205	80,715	7.2	100.0	100.0	100.0
Total without multiple count	68,100	69,600	73,100	7.3	…	…	…
Ethnic 'overcount' (%)	10.5	9.5	10.4	-1.1	…	…	…
Hawke's Bay Region							
European/NZ/Other	119,860	116,720	120,730	0.7	74.0	72.4	72.0
Māori	34,880	35,520	36,380	4.3	21.5	22.0	21.7
Pacific Peoples	4,210	5,300	6,060	43.9	2.6	3.3	3.6
Asian	2,650	3,270	3,870	46.0	1.6	2.0	2.3
Middle Eastern/Latin American/African (MELA	295	325	625	111.9	0.2	0.2	0.4
TOTAL	161,895	161,135	167,665	3.6	100.0	100.0	100.0
Total without multiple count	146,600	147,300	152,100	3.8	…	…	…
Ethnic 'overcount' (%)	10.4	9.4	10.2	-1.9	…	…	…
TOTAL NEW ZEALAND							
European/NZ/Other	3,074,610	3,074,010	3,213,330	4.5	75.2	72.8	70.1
Māori	573,180	585,970	624,310	8.9	14.0	13.9	13.6
Pacific Peoples	229,280	261,820	301,640	31.6	5.6	6.2	6.6
Asian	194,750	272,440	404,320	107.6	4.8	6.5	8.8
Middle Eastern/Latin American/African (MELA	18,450	27,660	38,550	108.9	0.5	0.7	0.8
TOTAL	4,090,270	4,221,900	4,582,150	12.0	100.0	100.0	100.0
Total without multiple count	3,732,000	3,880,500	4,184,500	12.1	…	…	…
Ethnic 'overcount' (%)	9.6	8.8	9.5	-1.0	…	…	…

Source: Statistics New Zealand, Estimated Subnational Ethnic Population (RC,TA) by Age and Sex at 30 June 1996, 2001 and 2006
*Notes: *Multiple Count means that people may be counted in more than one ethnic group - see Ethnic 'overcount' rows*

Table 1.2.2: Contribution to Change by Major Ethnic Group* (Multiple Count), Hastings District, Hawke's Bay Region, and Total New Zealand 1996-2006

				Contribution to Change	
	1996	2001	2006	Number	(%)
		NUMBER			
Hastings District					
European/NZ/Other	54,530	53,650	56,380	1850	34.0
Māori	16,790	17,120	17,770	980	18.0
Pacific Peoples	2,720	3,630	4,070	1350	24.8
Asian	1,065	1,635	2,140	1075	19.7
Middle Eastern/Latin American/African (MELAA)	165	170	355	190	3.5
TOTAL	75,270	76,205	80,715	5445	100.0
Hawke's Bay Region					
European/NZ/Other	119,860	116,720	120,730	870	15.1
Māori	34,880	35,520	36,380	1500	26.0
Pacific Peoples	4,210	5,300	6,060	1850	32.1
Asian	2,650	3,270	3,870	1220	21.1
Middle Eastern/Latin American/African (MELAA)	295	325	625	330	5.7
TOTAL	161,895	161,135	167,665	5770	100.0
TOTAL NEW ZEALAND					
European/NZ/Other	3,074,610	3,074,010	3,213,330	138720	28.2
Māori	573,180	585,970	624,310	51130	10.4
Pacific Peoples	229,280	261,820	301,640	72360	14.7
Asian	194,750	272,440	404,320	209570	42.6
Middle Eastern/Latin American/African (MELAA)	18,450	27,660	38,550	20100	4.1
TOTAL	4,090,270	4,221,900	4,582,150	491880	100.0

Source: Statistics New Zealand, Estimated Subnational Ethnic Population (RC,TA) by Age and Sex at 30 June 1996, 2001, 2006

*Notes: *Multiple Count means that people may be counted in more than one ethnic group*

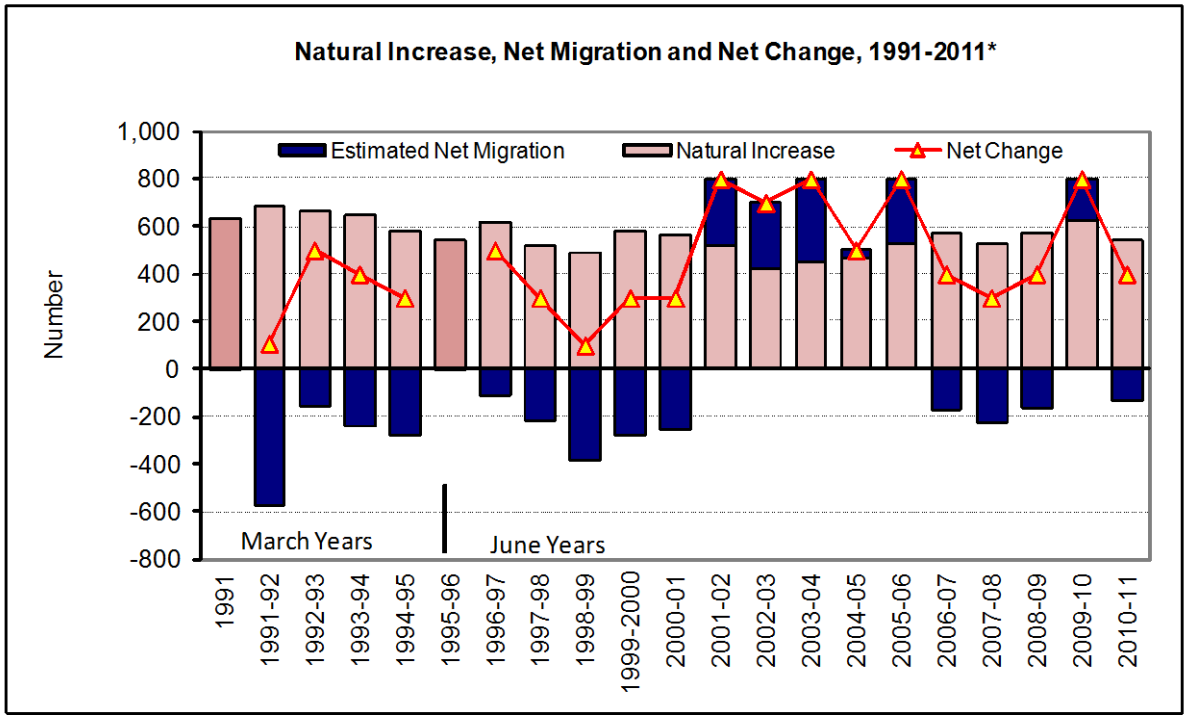
2.0 Components of Change

2.1 Natural Increase and Net Migration

Figure 2.1.1 shows the components of change contributing to growth for Hastings across the period 1991-2011 (see Table 2.1.1 for underlying data). Overwhelmingly the main component of growth has been natural increase (the difference between births and deaths). Reflecting the total population trends above, net migration loss across much of the 1990s and again across 2006-09 and in 2010-11 partially offset that growth.

Data for Hawke's Bay and Total New Zealand (Figures 2.1.2 and 2.1.3) place these trends in context, with the important - but often poorly acknowledged - role of natural increase relatively similar in both cases, and net migration loss also the driver of low overall growth across the 1998-2001 period, and of slow growth more recently.

Figure 2.1.1: Natural Increase, Net Migration and Net Change 1991-2011, Hastings District



**Changes in the timing and method of estimating Resident Population between 1995 and 1996 mean that only natural increase can be shown for that year*

Figure 2.1.2: Natural Increase, Net Migration and Net Change 1991-2011, Hawke's Bay RC

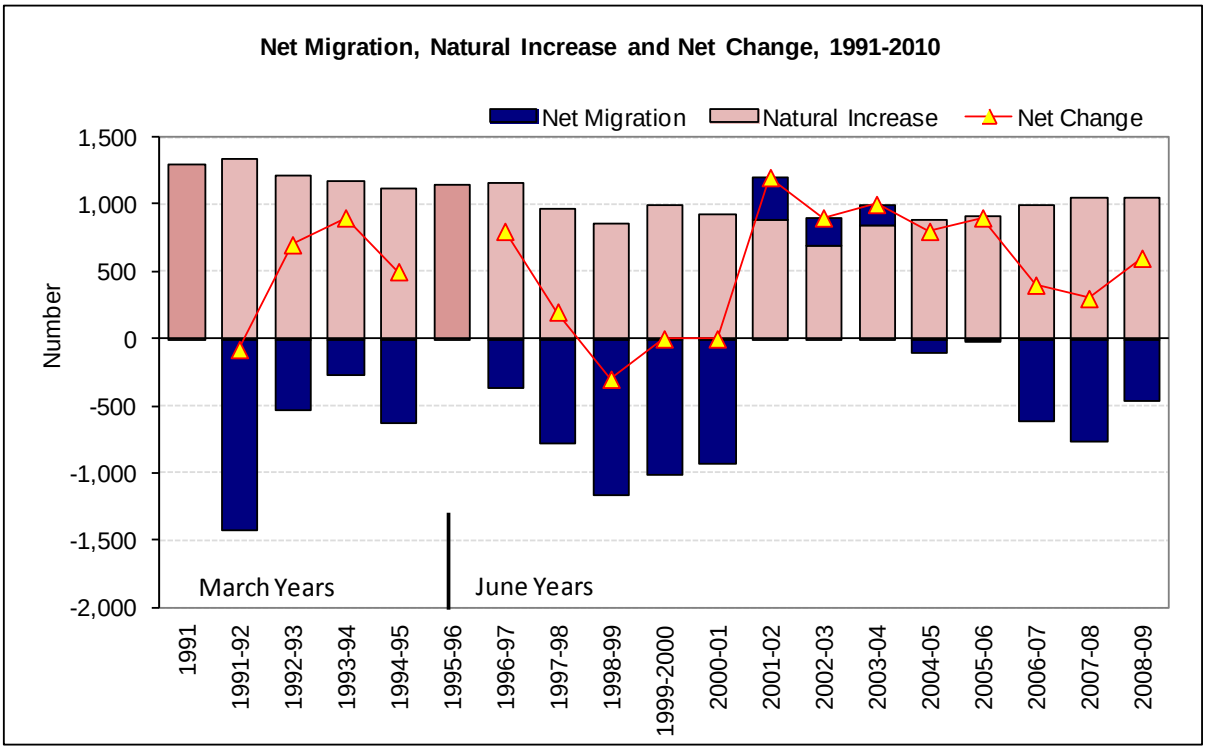
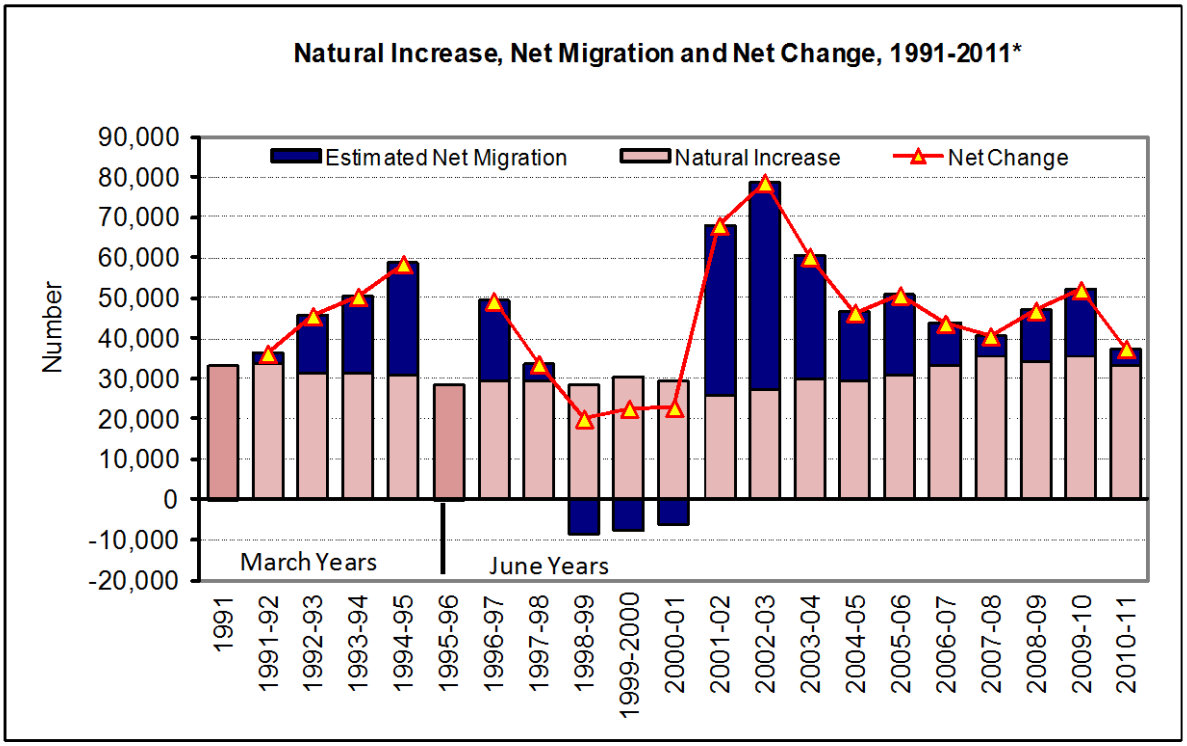


Figure 2.1.3: Natural Increase, Net Migration and Net Change 1991-2011, Total New Zealand



**Changes in the timing and method of estimating Resident Population between 1995 and 1996 mean that only natural increase can be shown for that year*

Table 2.1.1: Components of Change, 1991-2011, Hastings District and Total New Zealand

	Hastings District									Total New Zealand		
	Components						Contribution to Net Change			Contribution to Net Change		
	Births	Deaths	Natural Increase~	Estimated Resident Population (a)	Net Change*	Estimated Migration	Estimated Natural Increase^ (%)	Estimated Migration^ (%)	Net Change^ (%)	Estimated Natural Increase^ (%)	Estimated Migration^ (%)	Net Change^ (%)
March Year												
1991	1,168	529	639	64,693	…	…	…	…	…	…	…	…
1992	1,197	515	682	64,800	107	-575	1.05	-0.89	0.17	0.95	0.08	1.03
1993	1,210	549	661	65,300	500	-161	1.02	-0.25	0.77	0.89	0.40	1.28
1994	1,201	557	644	65,700	400	-244	0.99	-0.37	0.61	0.87	0.53	1.40
1995	1,154	576	578	66,000	300	-278	0.88	-0.42	0.46	0.84	0.76	1.60
June Year												
1996	1,086	542	544	68,100								
1997	1,176	561	615	68,600	500	-115	0.90	-0.17	0.73	0.79	0.53	1.32
1998	1,072	551	521	68,900	300	-221	0.76	-0.32	0.44	0.78	0.11	0.89
1999	1,051	561	490	69,000	100	-390	0.71	-0.57	0.15	0.75	-0.22	0.53
2000	1,106	524	582	69,300	300	-282	0.84	-0.41	0.43	0.79	-0.20	0.59
2001	1,098	538	560	69,600	300	-260	0.81	-0.38	0.43	0.76	-0.17	0.59
2002	1,069	554	515	70,400	800	285	0.74	0.41	1.15	0.67	1.08	1.75
2003	987	568	419	71,100	700	281	0.60	0.40	0.99	0.69	1.30	1.99
2004	1,031	580	451	71,900	800	349	0.63	0.49	1.13	0.74	0.76	1.50
2005	1,089	627	462	72,400	500	38	0.64	0.05	0.70	0.72	0.41	1.14
2006	1,100	573	527	73,200	800	273	0.73	0.38	1.10	0.75	0.48	1.23
2007	1,141	567	574	73,600	400	-174	0.78	-0.24	0.55	0.79	0.25	1.04
2008	1,109	584	525	73,900	300	-225	0.71	-0.31	0.41	0.84	0.12	0.96
2009	1,104	537	567	74,300	400	-167	0.77	-0.23	0.54	0.80	0.30	1.10
2010	1,209	585	624	75,100	800	176	0.84	0.24	1.08	0.82	0.39	1.20
2011	1,112	575	537	75,500	400	-137	0.72	-0.18	0.53	0.76	0.10	0.86

Source: *Compiled from Statistics New Zealand Infoshare: Estimated Resident Population, Table DPE051AA; Births, Table VSB016AA; Deaths, Table VSD018AA*

(a) 1991-1995 Estimated Defacto; 1996-2011 Estimated Usual Resident

~ Births minus Deaths

** Residual (Net Change minus Natural Increase)*

^ Natural Increase, Net Migration and Net Change as a percentage of previous year's URP

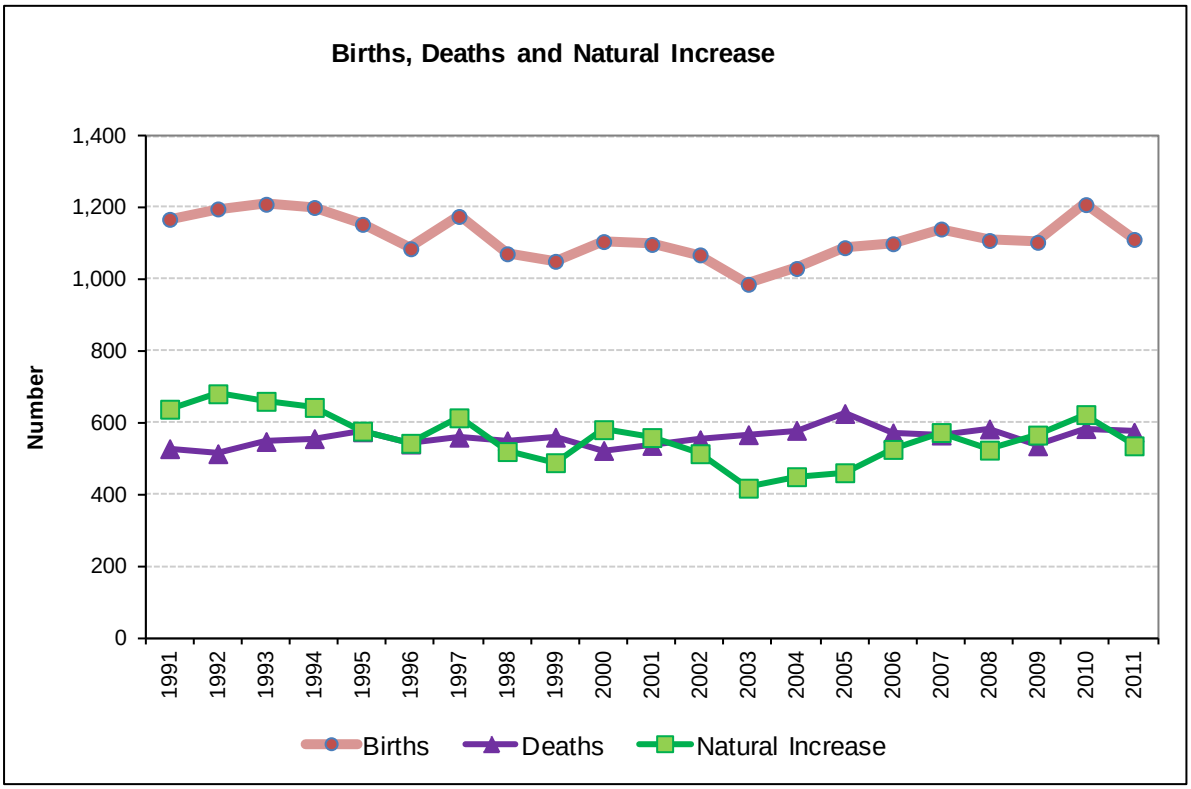
2.2 Births, Deaths and Natural Increase

Underlying the trends in natural increase shown above are those for births and deaths, depicted in Figure 2.2.1. Here we see that the main driver of natural increase has been a reasonably steady stream of births. Numbers fell somewhat during the late 1990s and early 2000s, and then – as elsewhere in most New Zealand – increased, peaking in 2010. For a number of reasons outlined below (most significantly the reducing size of the reproductive age cohort indicated in the section on age structures), birth numbers are not likely to see major increase in the future.

Deaths have also remained remarkably stable across the period, ranging annually between the mid- to high 500's (briefly passing 600 in 2005). However, the overall trend is a slow increase, which will soon accelerate as the Baby Boomer wave moves through the older age groups.

As the projections further below will show, the overall outcome of these opposing trends will be a steady reduction in natural increase.

Figure 2.2.1: Births, Deaths and Natural Increase, Hastings District 1991-2011

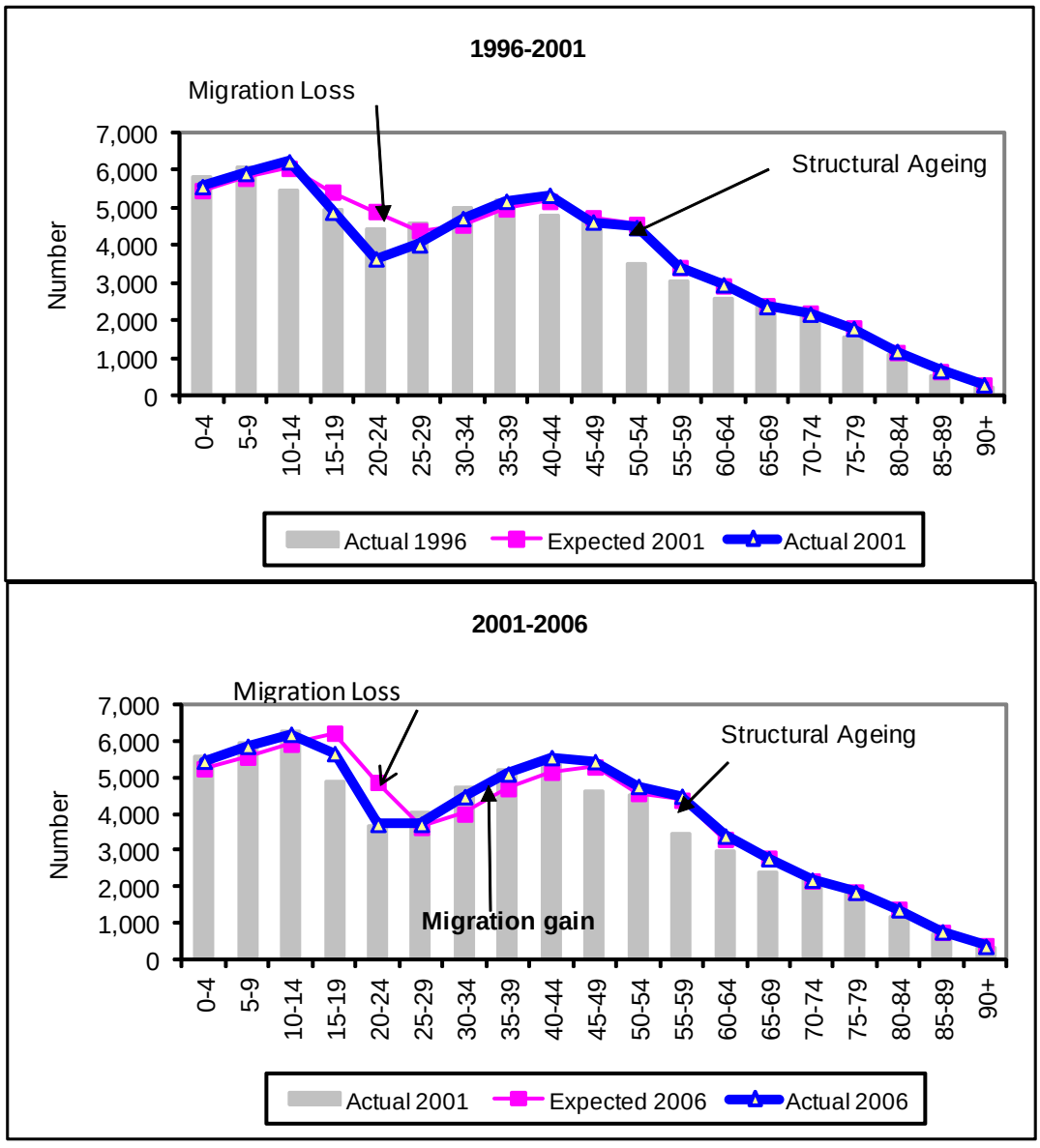


3.0 Components of Change by Age

3.1 Expected versus Actual Population

Using the residual method for estimating net migration described earlier, the components of change can be plotted by age. Figure 3.1.1 shows that the net migration losses indicated earlier in Figure 2.1.1 (see also Table 2.1.1) have occurred primarily at ages 15-19 and 20-24, while between 2001 and 2006, noticeable gain was experienced at 5-14 and 30-44 years.

Figure 3.1.1: Expected and Actual Population by Age, 1996-2001 and 2001-2006, Hastings District

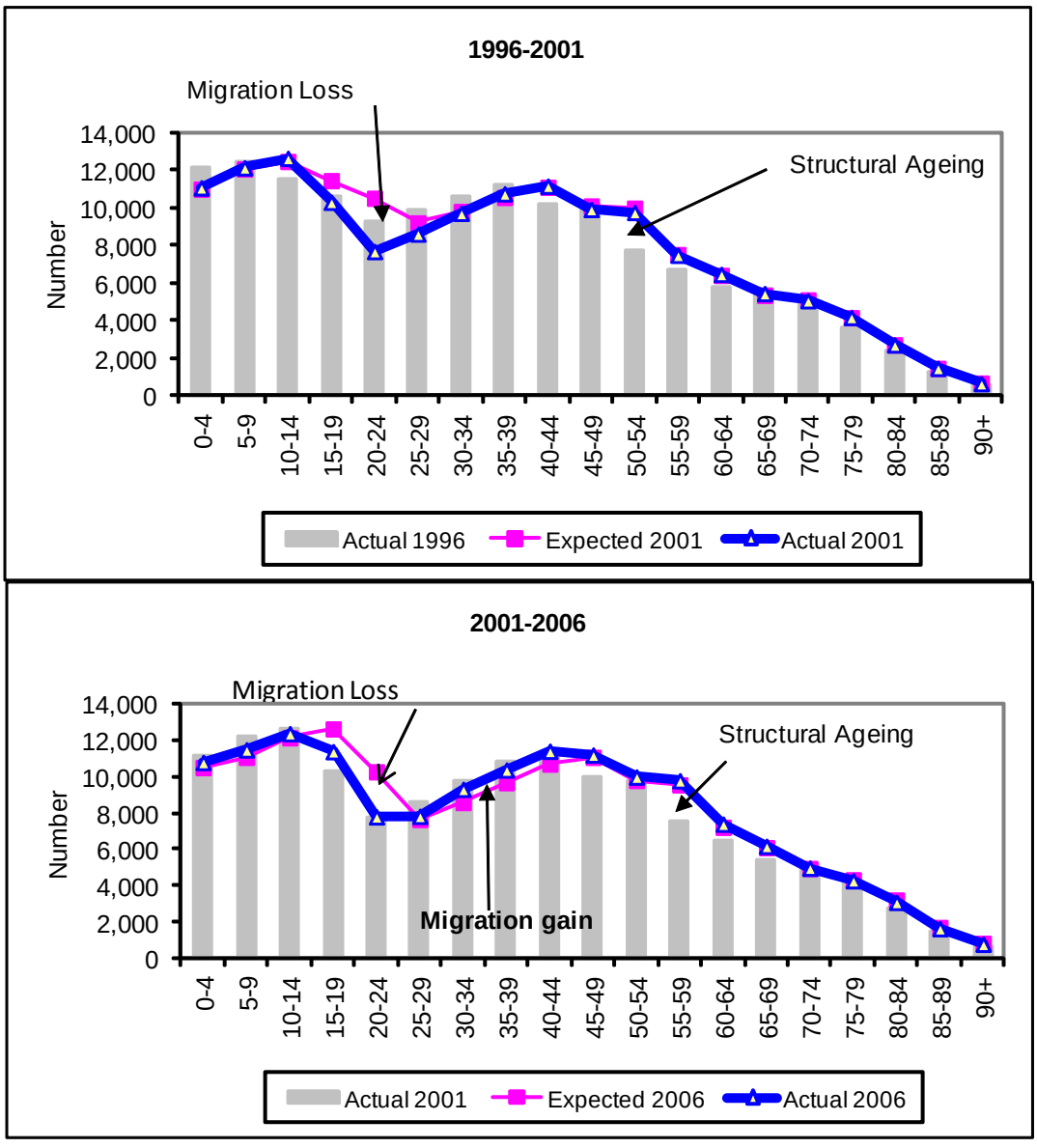


Source: *Jackson/from Statistics New Zealand ERP and New Zealand Survivorship 1995-2007*

Data for the Hawke's Bay Region are almost identical (Figure 3.1.2)(for data see Appendices 2.1-2.4).

Of note for both regions is the impact of structural ageing which shows at 50-54 years across the 1996-2001 period, and 55-59 years for 2001-2006. That is, the gap between numbers at the previous Census (columns) and Expected/Actual numbers at the subsequent Census reflects the movement of the Baby Boomer wave through the age structure.

Figure 3.1.2: Expected and Actual Population by Age, 1996-2001 and 2001-2006, Hawke's Bay RC

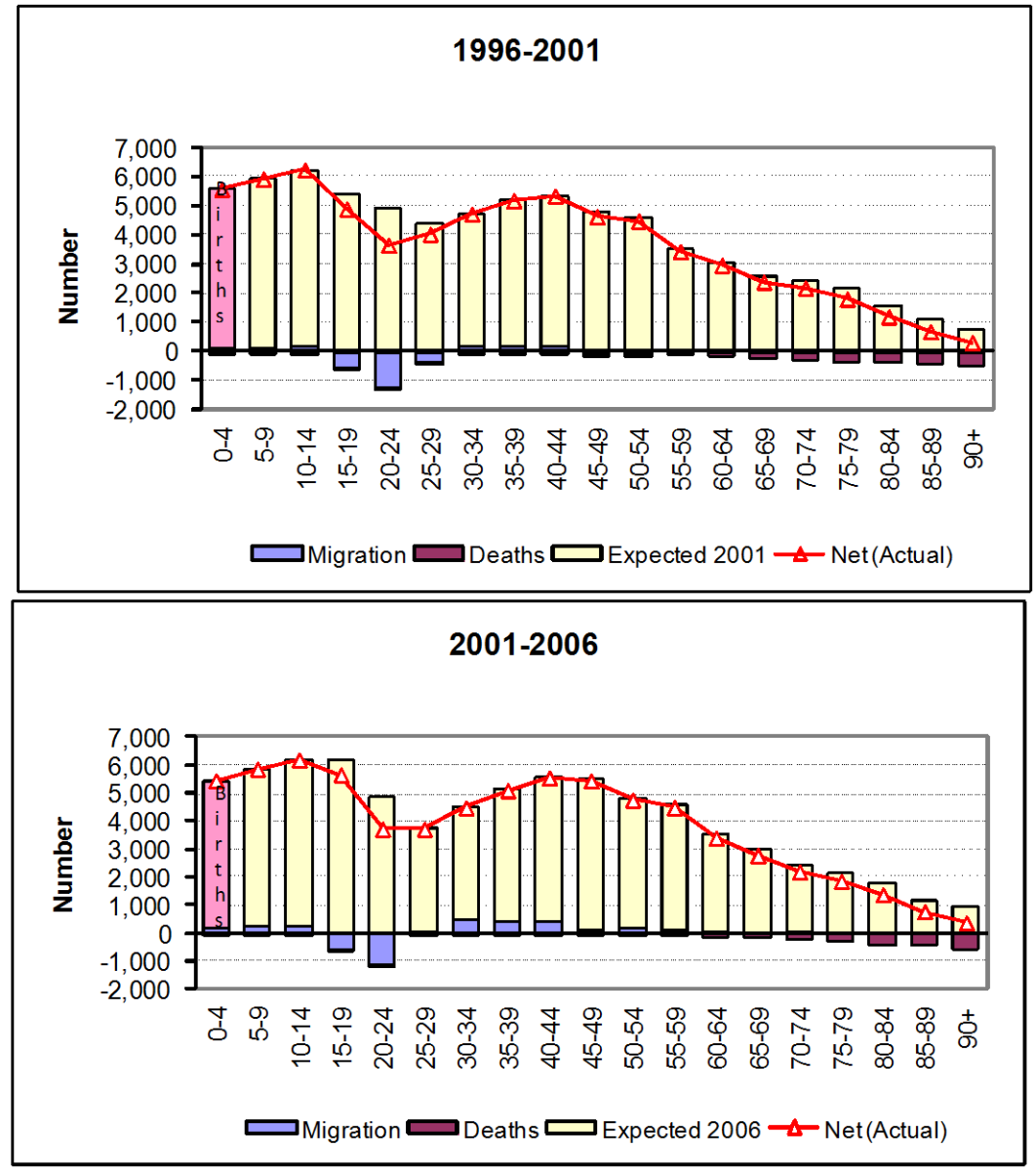


Source: Jackson/from Statistics New Zealand ERP and New Zealand Survivorship 1995-2007

3.2 Expected versus Actual Change by Component

Similar data are plotted in Figure 3.2.1 for Hastings only, this time to highlight the role of each component. As indicated above, the primary driver reducing the expected numbers at the younger adult ages is migration, while at older ages it is deaths. By contrast, minor net migration gain is detectable at 5-14, 30-44 and 65-69 years across both periods, and also at 45-64 years, increasing between 2001 and 2006. The information is important because it is free of cohort size effects, which have already been accounted for in the methodology.

Figure 3.2.1: Population Change by Age and Component, 1996-2001 and 2001-2006, Hastings District



Source: Jackson/from Statistics New Zealand ERP and New Zealand Survivorship 1995-2007

4.0 Age Structure and Population Ageing

4.1 Numerical and Structural Ageing

As elsewhere , the population of Hastings is ageing. It is ageing numerically, as more people survive to older ages, and structurally, as falling birth rates and reducing numbers at the key reproductive ages deliver fewer babies into the base of the age structure, causing the proportions at younger ages to decrease and the increased numbers at older ages to also become increased proportions.

Migration is also playing a role. As indicated above, Hastings' structural ageing is accelerated in the first instance because of net migration loss at the young adult ages, particularly 15-19 and 20-24 years. The loss of people at these youthful ages accelerates the structural ageing process in two ways, firstly as a direct result of the reduction in their own numbers; secondly because it removes their reproductive potential, along with any children they may have. It is accelerated in the second instance by modest net gains at older ages, which add to both numerical and structural ageing.

Figure 4.1.1 illustrates the outcome of these trends over the period 1996-2010 (see Table 4.1.1 for summary data). Most obvious from Figure 4.1.1 is the shift from a relatively youthful age structure in 1996 to a deeply waisted ('hour glass') structure by 2001, indicating significant net migration loss at 20-34 years. The bite deepens at each observation until 2008, while in 2010 there is evidence of a minor increase at 20-24 and 25-29 years (reflected also in a small numerical increase). Importantly, Hastings is not alone in experiencing this youthful deficit, which is evident across most of New Zealand's non-urban regions, and which is also partly a reflection of declining birth rates at the time the current population aged 20-34 years was born. The bite is, however, significantly deeper for Hastings than for Total New Zealand, as can be seen in the lower right-hand panel.

Compression at the youngest ages due to declining birth rates over the period 1996-2006 is clear, followed by a small resurgence in births since 2008. Notably the proportion at the youngest ages (0-4 years) in 2010 is slightly larger for Hastings than Total New Zealand – in part reflecting the relative lack of people at the key reproductive ages, and in part, larger proportions at older ages. As Table 4.1.1 shows, Hastings' population aged 65+ years has increased from 11.8 per cent in 1996 to 13.9 per cent in 2010, making it fractionally older than Total New Zealand (13 per cent), but somewhat younger than the Hawke's Bay Region (15 per cent).

Figure 4.1.1: Age-Sex Structure Hastings District, 1996-2010, and compared with New Zealand 2010

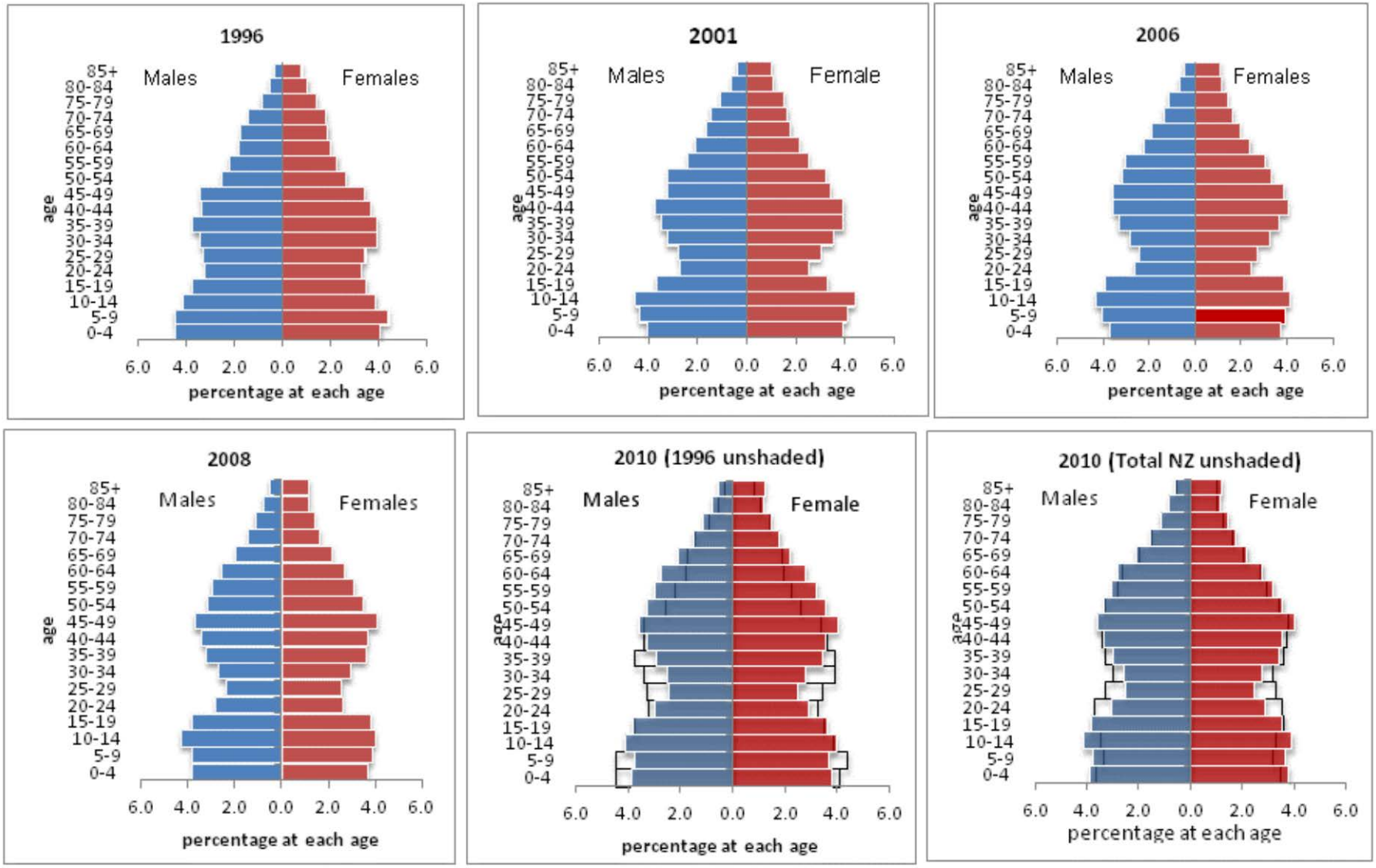


Table 4.1.1: Summary Indicators of Change by Age, 1996-2010, Hastings District and Key Comparisons

Hastings District	1996	2001	2006	2007	2008	2009	2010	1996-2001	2001-2006	2006-07	2007-08	2008-09	2009-10
				Number				Av. Annual Change (%)			Annual Change (%)		
Broad Age Group													
0-14	17,300	17,720	17,500	17,470	17,330	17,270	17,340	0.5	-0.2	-0.2	-0.8	-0.3	0.4
15-24	9,350	8,540	9,380	9,510	9,670	9,820	10,010	-1.7	2.0	1.4	1.7	1.6	1.9
25-54	27,720	28,370	29,050	28,880	28,680	28,550	28,470	0.5	0.5	-0.6	-0.7	-0.5	-0.3
55-64	5,640	6,390	7,890	8,100	8,350	8,600	8,830	2.7	4.7	2.7	3.1	3.0	2.7
65+	8,030	8,530	9,360	9,670	9,820	10,050	10,410	1.2	1.9	3.3	1.6	2.3	3.6
Hastings District	68,040	69,550	73,180	73,630	73,850	74,290	75,060	0.4	1.0	0.6	0.3	0.6	1.0
Total NZ	3,731,970	3,880,500	4,184,600	4,228,330	4,315,770	4,268,870	4,367,780	0.8	1.6	1.0	1.0	1.1	1.2
Hawke's Bay Regi	146,630	147,340	152,100	152,560	152,790	153,460	154,770	0.1	0.6	0.3	0.2	0.4	0.9
				Percentage				Av. Annual Change (%)			Annual Change (%)		
0-14	25.4	25.5	23.9	23.7	23.5	23.2	23.1	0.0	-1.2	-0.8	-1.1	-0.9	-0.6
15-24	13.7	12.3	12.8	12.9	13.1	13.2	13.3	-2.1	0.9	0.8	1.4	0.9	0.9
25-54	40.7	40.8	39.7	39.2	38.8	38.4	37.9	0.0	-0.5	-1.2	-1.0	-1.0	-1.3
55-64	8.3	9.2	10.8	11.0	11.3	11.6	11.8	2.2	3.5	2.0	2.8	2.4	1.6
65+	11.8	12.3	12.8	13.1	13.3	13.5	13.9	0.8	0.9	2.7	1.2	1.7	2.5
Hastings District	100.0	100.0	100.0	100.0	100.0	100.0	100.0	…	…	…	…	…	…
Total NZ %65+ yea	11.5	11.9	12.2	12.5	12.8	12.6	13.0	0.6	0.6	1.9	2.8	-1.6	3.4
Hawkes Bay Regic	12.6	13.3	13.8	14.1	14.4	14.7	15.0	1.0	0.8	2.4	1.7	2.1	2.2

Ratio Labour Market Entrants to Exits (Number aged 15-24 per 10 persons aged 55-64)

	1996	2001	2006	2007	2008	2009	2010	1996-2001	2001-2006	2006-07	2007-08	2008-09	2009-10
				Number				Av. Annual Change (%)			Annual Change (%)		
Hastings District	16.6	13.4	11.9	11.7	11.6	11.4	11.3	-3.9	-2.2	-1.2	-1.4	-1.4	-0.7
Total NZ	18.3	15.2	14.1	13.9	13.4	13.6	13.2	-3.3	-1.5	-1.2	-2.3	-1.5	-1.1
Hawke's Bay Regi	15.9	12.9	11.2	11.0	10.8	10.7	10.6	-3.8	-2.7	-1.2	-1.9	-1.4	-0.5

Ratio Elderly to Children (Number 65+ per Child 0-14)

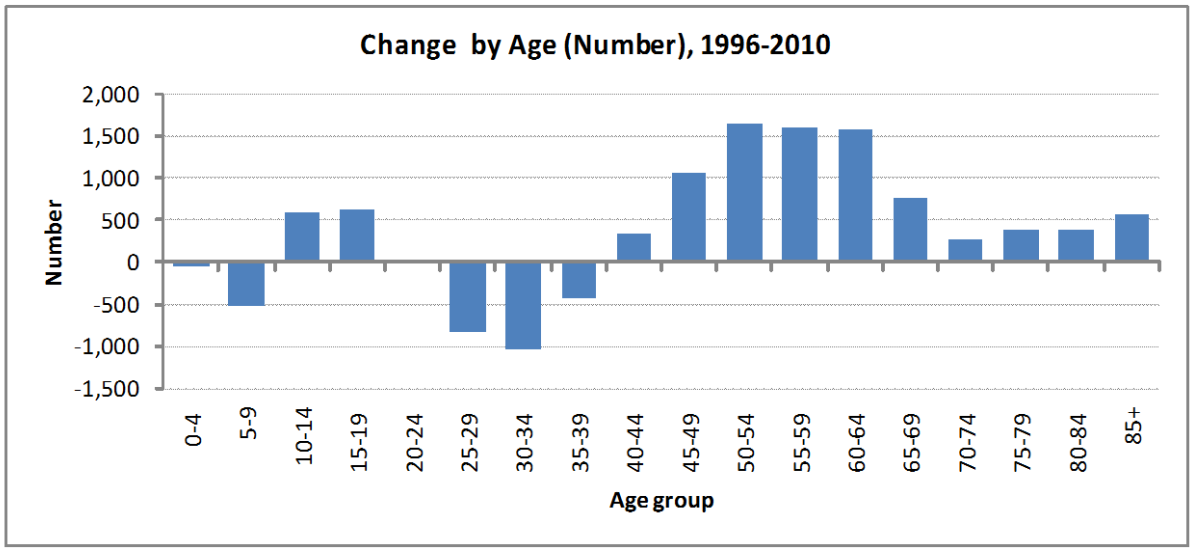
	1996	2001	2006	2007	2008	2009	2010	1996-2001	2001-2006	2006-07	2007-08	2008-09	2009-10
				Number				Av. Annual Change (%)			Annual Change (%)		
Hastings District	0.46	0.48	0.53	0.55	0.57	0.58	0.60	0.7	2.2	3.5	2.4	2.7	3.2
Total NZ	0.50	0.53	0.58	0.59	0.62	0.60	0.64	1.0	1.9	2.9	2.0	2.5	2.6
Hawke's Bay Regi	0.51	0.54	0.61	0.63	0.64	0.66	0.68	1.2	2.3	3.4	2.5	2.9	2.9

Source: *Jackson, N.O (2011) Subnational Age Structure Resource 1996-2010, National Institute of Demographic and Economic Analysis (NIDEA), University of Waikato*

Notes: *Source data from Stats NZ Infoshare Estimated Subnational Population (RC, TA,AU) by Age and Sex at 30 June 1996, 2001 and 2006-2010*

Overall trends by five-year age group are summarised in Figure 4.1.2 (see Table 4.1.2 for comparison with Total New Zealand and Hawke's Bay). Between 1996 and 2010, numbers for Hastings declined at most younger ages (the exceptions being at 10-14 and 15-19 years) and increased at all older ages, most particularly across the Baby Boomer age groups. Importantly, as indicated in Section 3 (above), some of these changes reflect cohort size effects, with smaller cohorts replacing larger cohorts at the younger ages, and vice-versa at older ages; however the data provide important information for planning and resource allocation. The trends are highly similar for Total Hawke's Bay, albeit the losses at each age are slightly greater, while for Total New Zealand, net decline has occurred at ages 5-9 and 30-34 years only.

Figure 4.1.2: Change by Age (Number), Hastings District, 1996-2010



Source: Jackson, N.O (2011) Subnational Age Structure Resource 1996-2010, NIDEA, University of Waikato
Source data from Stats NZ Infoshare Estimated Subnational Population (RC, TA,AU) by Age and Sex at 30 June 1996, 2001, 2006-2010

Table 4.1.2: Change by Age (%), Hastings District, Hawke's Bay, and Total New Zealand, 1996-2010

	Hastings District		Hawkes Bay	Total New Zealand
	Change 1996-2010			
	Number	%	%	%
0-4	(40)	-0.7	-4.5	5.8
5-9	(510)	-8.4	-13.3	-3.0
10-14	590	10.8	2.0	10.0
15-19	630	12.8	5.6	19.0
20-24	30	0.7	-3.7	12.5
25-29	(840)	-18.4	-20.2	1.2
30-34	(1,040)	-20.8	-23.3	-10.8
35-39	(430)	-8.3	-12.0	1.8
40-44	340	7.1	1.6	18.0
45-49	1,070	23.1	14.1	29.4
50-54	1,650	47.0	37.6	51.1
55-59	1,600	52.3	44.8	52.8
60-64	1,590	61.6	60.5	67.5
65-69	760	30.8	23.8	30.5
70-74	280	12.9	9.8	18.4
75-79	390	25.2	22.8	25.6
80-84	390	36.4	36.1	43.1
85+	560	72.7	65.0	78.8
Total	7,000	10.3	5.6	17.0

Source: *Jackson, N.O (2011) Subnational Age Structure Resource 1996-2010, NIDEA, University of Waikato*

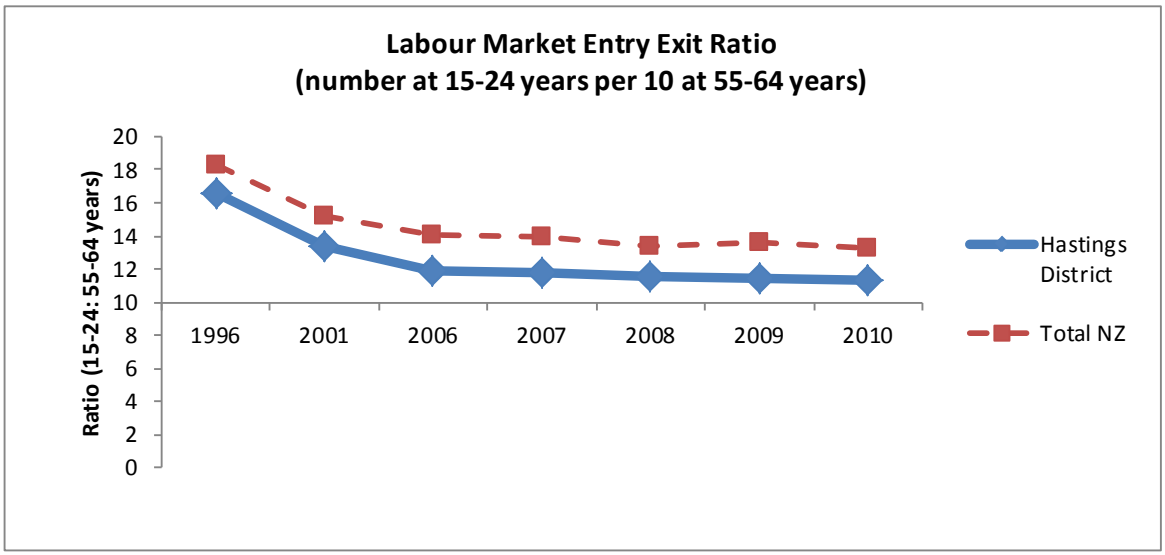
Notes: *Source data from Stats NZ TableBuilder Estimated Subnational Population by Age and Sex at 30 June*

4.2 Labour Market Implications

Table 4.1.1 (above) also showed that Hastings's Labour Market 'entry/exit ratio' has fallen since 1996, from 16.6 people at labour market entry age for every 10 in the retirement age zone, to just 11.3 per 10 in 2010 (see Figure 4.2.1). By comparison, Total New Zealand still has 13.2 people at entry age per 10 at exit age, while the Hawke's Bay Region, slightly older than Hastings, has just 10.6 per 10.

If older age groupings are used, for example 20-29 and 60-69 years, Hastings in 2010 had 11.1 entrants per 10 exits, while Total New Zealand had 14.8 and Hawke's Bay had 10.3. Again the disparity with Total New Zealand is the significantly deeper bite at ages 20-34 for Hastings and the Hawke's Bay. This issue is returned to further below.

Figure 4.2.1: Labour Market Entry/Exit Ratio, Hastings District and Total New Zealand, 1996-2010



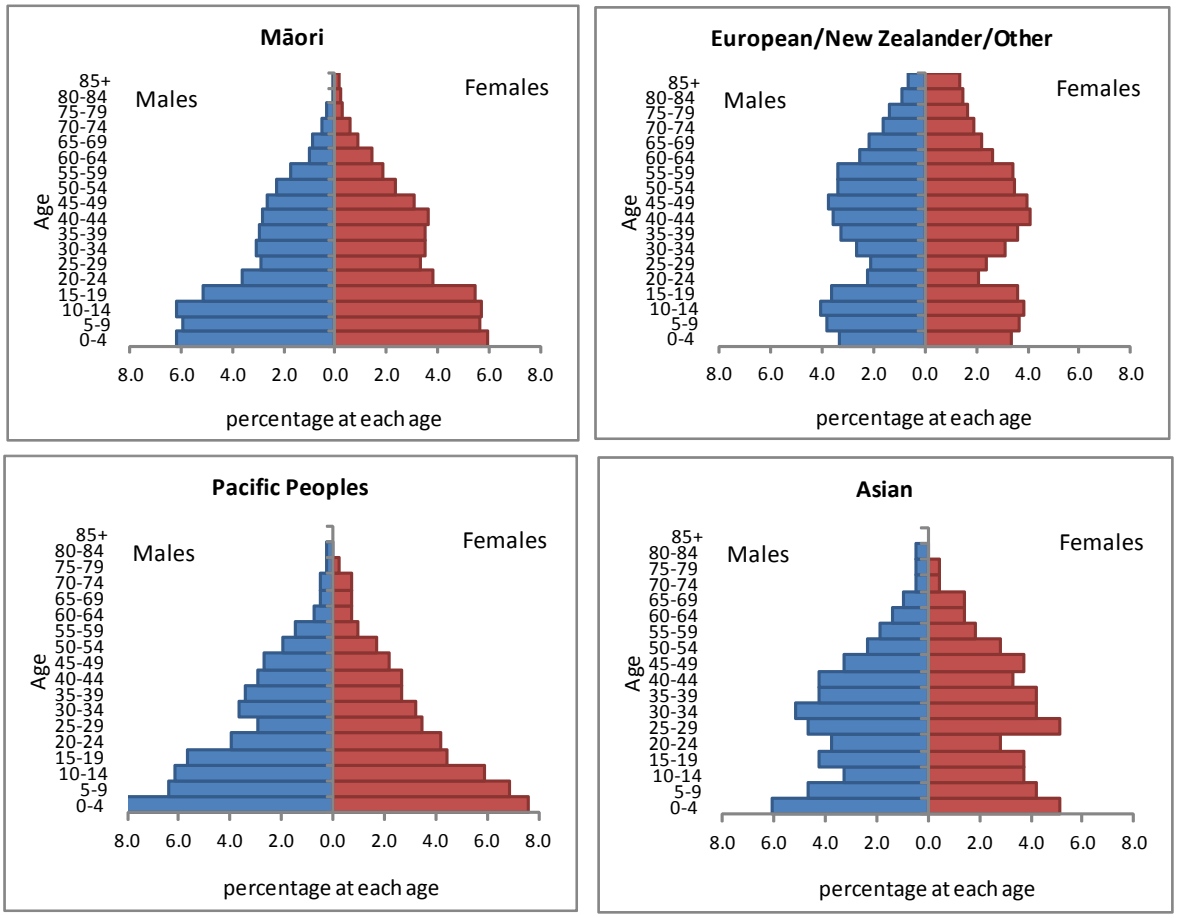
Source: Jackson, N.O (2011) Subnational Age Structure Resource 1996-2010, NIDEA, University of Waikato
Source data from Stats NZ Infoshare Estimated Subnational Population (RC, TA,AU) by Age and Sex at 30 June 1996, 2001, 2006-2010

4.3 Ethnic Age Composition and Ageing

Figure 4.3.1 provides a comparison of Hastings' major ethnic groups in 2006, according to the multiple count enumeration method discussed above. As was indicated in Table 1.2.1 above, this method of enumeration means that a portion of the population is counted in more than one ethnic group. In Hastings' case, the over-count for 2006 (when the totals by ethnic group are summed) was approximately 10.3 per cent. However as can be seen by the markedly different age structures of each group in Figure 4.3.1, this methodological complexity would have very little impact on the story by age composition.

The data suggest that the bite in the age structure is very much connected with the European/New Zealander/Other population. While it also appears to some extent for the Asian population, it is difficult to say that its cause is the same. For example, for the European/New Zealander/Other population, the bite would appear to be related to net migration loss at those ages, while for the Asian population it may reflect an influx of children and young adults. Numbers for the Middle Eastern/Latin American/African (MELAA) population are too small to give a reliable picture by age.

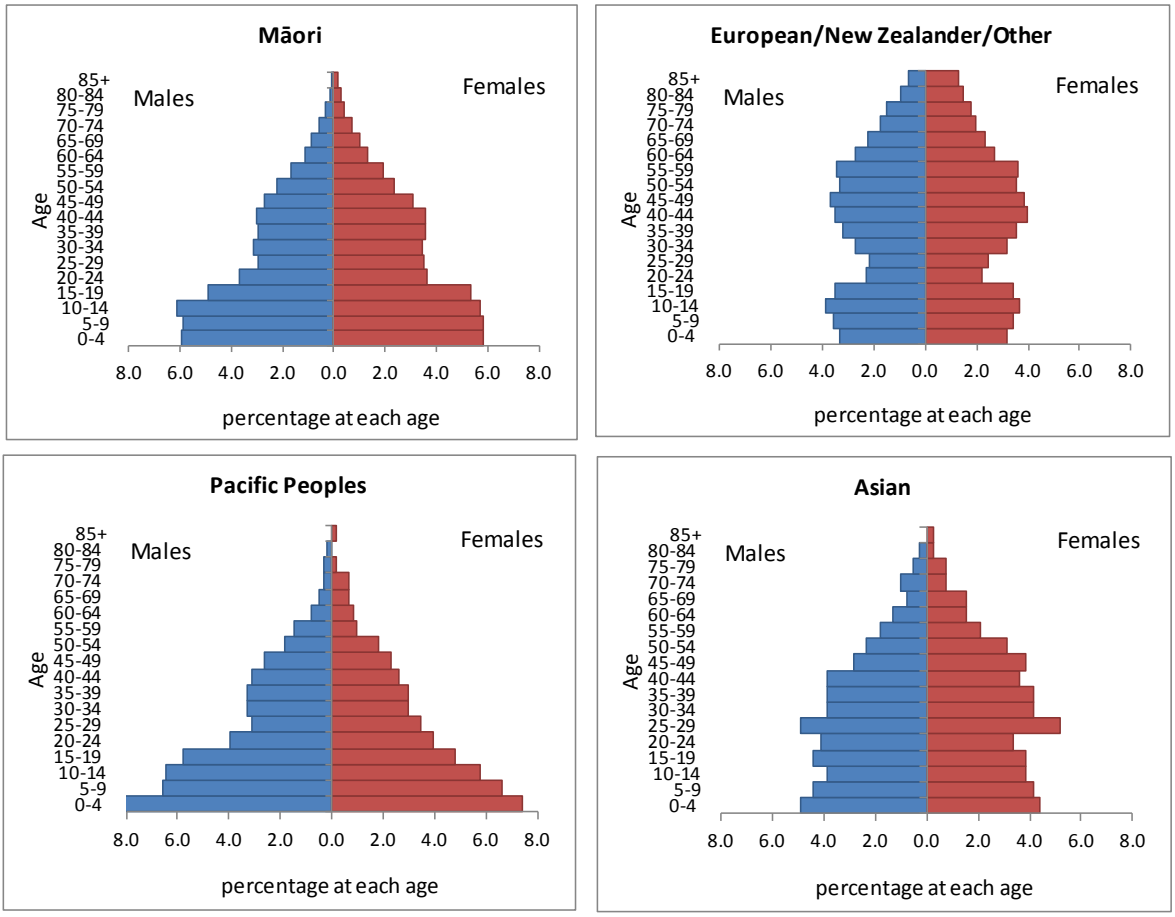
Figure 4.3.1: Age-Sex Structure by Major Ethnic Group*, Hastings District 2006



Source: Statistics New Zealand, Estimated Subnational Ethnic Population (RC,TA) by Age and Sex at 30 June 2006
Notes: Multiple count ethnicity means that people may be counted in both populations

Similar comments apply to the situation for the Hawke's Bay Region (Figure 4.3.2). The differences by ethnic group are equally marked, although there is some disparity between the Asian-origin population of Hastings and the total Hawke's Bay Region, particularly for males at 30-44 years.

Figure 4.3.2: Age-Sex Structure by Major Ethnic Group*, Hawke's Bay Region 2006



Source: Statistics New Zealand, Estimated Subnational Ethnic Population (RC,TA) by Age and Sex at 30 June 2006
Notes: Multiple count ethnicity means that people may be counted in both populations

Tables 4.3.1- 4.3.4 provide summary data for the Māori, Pacific Island, Asian, and European/New Zealander/Other populations. As above, data for the Middle Eastern/Latin American/African population are not presented because of very small numbers by age.

Table 4.3.1 shows that the very youthful age structure of Hastings's Māori population results in over one-third aged 0-14 years across all three observations, falling from 37.8 per cent in 1996 to 35.6 per cent in 2006. These proportions are in stark contrast to their 22.0 per cent total share shown earlier in Table 1.2.1, and are clearly where the Māori population's contribution to Hastings's growth is concentrated.

At 65+ years, numbers and proportions have grown significantly, albeit still only just above 4.0 per cent in 2006. The data indicate that Hastings's Māori population is slightly more youthful than its counterpart in Hawke's Bay Region, where the proportion aged 65+ is a little higher (4.5 per cent), and the labour market entry/exit ratio fractionally lower (see Section 6 on this topic).

Table 4.3.1: Summary Indicators, Hastings District Māori Population, 1996, 2001, 2006

Māori	1996	2001	2006	...	1996-2001	2001-2006
		Number			Change (%) over 5 years	
Broad Age Group						
0-14	6,350	6,530	6,330	...	2.8	-3.1
15-24	3,160	2,990	3,220	...	-5.4	7.7
25-54	5,960	6,210	6,430	...	4.2	3.5
55-64	760	820	1,070	...	7.9	30.5
65+	560	570	720	...	1.8	26.3
Hastings District	16,790	17,120	17,770	...	2.0	3.8
Total NZ Māori	573,180	585,970	624,310	...	2.2	6.5
Hawke's Bay Region	34,880	35,520	36,380	...	1.8	2.4
		Percentage				
0-14	37.8	38.1	35.6	...	0.9	-6.6
15-24	18.8	17.5	18.1	...	-7.2	3.8
25-54	35.5	36.3	36.2	...	2.2	-0.2
55-64	4.5	4.8	6.0	...	5.8	25.7
65+	3.3	3.3	4.1	...	-0.2	21.7
Hastings District	100.0	100.0	100.0	...	...	...
Total NZ Māori % 65+ years	3.0	3.4	4.1	...	11.8	22.0
Hawke's Bay Region (65+ year	3.5	3.8	4.5	...	8.7	18.6

Ratio Labour Market Entrants to Exits (Number aged 15-24 per 10 persons aged 55-64)

	1996	2001	2006	...	1996-2001	2001-2006
		Number			Change (%) over 5 years	
Hastings District	41.6	36.5	30.1	...	-12.3	-17.5
Total NZ Māori	42.0	36.9	33.1	...	-12.1	-10.2
Hawke's Bay Region	38.3	35.1	29.0	...	-8.3	-17.3

Ratio Elderly to Children (Number 65+ per Child 0-14)

	1996	2001	2006	...	1996-2001	2001-2006
		Number			Change (%) over 5 years	
Hastings District	0.09	0.09	0.11	...	-1.0	30.3
Total NZ Māori	0.08	0.09	0.12	...	11.8	30.5
Hawke's Bay Region	0.09	0.10	0.13	...	7.5	26.5

Source: Jackson, N.O. (2011) Subnational Age Structure Resource 1996, 2001, 2006, NIDEA, University of Waikato.

Notes: Source data from Stats NZ TableBuilder Estimated Subnational Population (RC,TA,AU) by Age and Sex at 30 June 96,01,06

Notes: Multiple count ethnicity means that people may be counted in more than one ethnic group

The Pacific Island population of Hastings is even more youthful than that of Māori, with over 41 per cent aged 0-14 years at each observation (Table 4.3.2). Reflecting this concentration at younger ages, only 3.2 per cent of Hastings' Pacific Island population in 2006 was aged 65+ years. This was a fractionally higher proportion than for the Hawke's Bay Region (3.0 per cent), meaning that it is slightly older than its Hawke's Bay counterpart, but lower than for Total New Zealand (3.8 per cent). As was the case for Māori, the Pacific Island population's contribution to the growth of the region is clearly also concentrated at the youngest ages.

Table 4.3.2: Summary Indicators, Hastings District Pacific Island Population, 1996, 2001, 2006

Pacific Island	1996	2001	2006	…	1996-2001	2001-2006
	Number				Change (%) over 5 years	
Broad Age Group						
0-14	1,150	1,510	1,670	…	31.3	10.6
15-24	510	610	740	…	19.6	21.3
25-54	880	1,300	1,370	…	47.7	5.4
55-64	130	120	160	…	…	…
65+	50	90	130	…	…	…
Hastings District	2,720	3,630	4,070	…	33.5	12.1
Total NZ Pacific Island	229,280	261,820	301,640	…	14.2	15.2
Hawke's Bay Region	4,210	5,300	6,060	…	25.9	14.3
	Percentage					
0-14	42.3	41.6	41.0	…	-1.6	-1.4
15-24	18.8	16.8	18.2	…	-10.4	8.2
25-54	32.4	35.8	33.7	…	10.7	-6.0
55-64	4.8	3.3	3.9	…	-30.8	18.9
65+	1.8	2.5	3.2	…	34.9	28.8
Hastings District	100.0	100.0	100.0	…	…	…
Total NZ Pacific Island	3.1	3.4	3.8	…	11.8	11.8
Hawke's Bay Region	2.6	2.6	3.0	…	1.1	12.4
Ratio Labour Market Entrants to Exits (Number aged 15-24 per 10 persons aged 55-64)						
	1996	2001	2006	…	1996-2001	2001-2006
	Number				Change (%) over 5 years	
Hastings District	39.2	50.8	46.3	…	29.6	-9.0
Total NZ Pacific Island	47.1	40.0	37.2	…	-14.9	-7.0
Hawke's Bay Region	49.4	48.4	44.8	…	-1.9	-7.5
Ratio Elderly to Children (Number 65+ per Child 0-14)						
	1996	2001	2006	…	1996-2001	2001-2006
	Number				Change (%) over 5 years	
Hastings District	0.04	0.06	0.08	…	37.1	30.6
Total NZ Pacific Island	0.08	0.09	0.10	…	12.0	16.8
Hawke's Bay Region	0.06	0.06	0.07	…	3.4	13.5

Source: Jackson, N.O (2011) Subnational Ethnic Age Structure Resource 1996, 2001, 2006, NIDEA

Notes: Source data from Stats NZ TableBuilder Estimated Subnational Population (RC,TA,AU) by Age and Sex at 30 June 96,01,06.

Notes: Multiple count ethnicity means that people may be counted in more than one ethnic group

The data for the region's Asian population identify quite different proportions by age (Table 4.3.3). With just 27.1 per cent of the Hastings Asian population aged 0-14 years in 2006, a slightly higher proportion is aged 65+ years (4.7 per cent). Comparison with the Hawke's Bay region and total New Zealand Asian populations points to a somewhat older Asian population across the region (6.2 per cent), but a similar age structure nationally (4.7 per cent).

Table 4.3.3: Summary Indicators, Hastings District Asian Population, 1996, 2001, 2006

Asian	1996	2001	2006	...	1996-2001	2001-2006
	Number			Change (%) over 5 years		
Broad Age Group						
0-14	305	415	580	...	36.1	39.8
15-24	180	270	310	...	50.0	14.8
25-54	490	765	1,010	...	56.1	32.0
55-64	55	100	140	...	81.8	40.0
65+	35	85	100	...	142.9	17.6
Hastings District	1,065	1,635	2,140	...	53.5	30.9
Total NZ Asian	194,750	272,440	404,320	...	39.9	48.4
Hawke's Bay Region	2,650	3,270	3,870	...	23.4	18.3
		Percentage				
0-14	28.6	25.4	27.1	...	-11.4	6.8
15-24	16.9	16.5	14.5	...	-2.3	-12.3
25-54	46.0	46.8	47.2	...	1.7	0.9
55-64	5.2	6.1	6.5	...	18.4	7.0
65+	3.3	5.2	4.7	...	58.2	-10.1
Hastings District	100.0	100.0	100.0	...	...	...
Total NZ Asian	3.0	4.2	4.7	...	37.9	11.4
Hawke's Bay Region	5.3	6.1	6.2	...	15.8	1.4

Ratio Labour Market Entrants to Exits (Number aged 15-24 per 10 persons aged 55-64)

	1996	2001	2006	...	1996-2001	2001-2006
	Number			Change (%) over 5 years		
Hastings District	32.7	27.0	22.1	...	-17.5	-18.0
Total NZ Asian	51.0	37.5	36.3	...	-26.3	-3.3
Hawke's Bay Region	30.0	29.0	23.5	...	-3.3	-19.1

Ratio Elderly to Children (Number 65+ per Child 0-14)

	1996	2001	2006	...	1996-2001	2001-2006
	Number			Change (%) over 5 years		
Hastings District	0.11	0.20	0.17	...	78.5	-15.8
Total NZ Asian	0.12	0.19	0.23	...	58.7	21.6
Hawke's Bay Region	0.19	0.25	0.24	...	30.2	-4.2

Source: Jackson, N.O (2011) Subnational Ethnic Age Structure Resource 1996, 2001, 2006, NIDEA

Notes: Source data from Stats NZ TableBuilder Estimated Subnational Population (RC,TA,AU) by Age and Sex at 30 Jun

Notes: Multiple count ethnicity means that people may be counted in more than one ethnic group

The data for the region's European/New Zealander/Other population (Table 4.3.4) also stand in stark contrast to that for the other ethnic groups. For Hastings, overall numbers in fact declined between 1996 and 2001 (1.6 per cent). Growth for this group resumed between 2001 and 2006, resulting in overall change of 3.4 per cent. However the gains were not shared evenly by age. As Table 4.2.4 shows, net loss was experienced for age groups below 54 years, with gains above those ages partially offsetting the losses. With 15.2 per cent aged 65+ years in 2006, the European/New Zealander/Other population of Hastings is a little younger than its Hawke's Bay counterpart (16 per cent). The 65+ year European/New Zealander/Other population of Hastings is also not increasing quite as fast as in the Hawke's Bay generally (9.9 per cent between 1996 and 2006 for Hastings, compared with 10.1 per cent for Hawke's Bay), but faster than Total New Zealand (8.8 per cent).

Table 4.3.4: Summary Indicators, Hastings District European/NZ/Other Population, 1996, 2001, 2006

European/NZ/Other	1996	2001	2006	...	1996-2001	2001-2006
		Number			Change (%) over 5 years	
Broad Age Group						
0-14	12,750	12,540	12,410	...	-1.6	-1.0
15-24	6,890	5,810	6,480	...	-15.7	11.5
25-54	22,440	21,920	22,180	...	-2.3	1.2
55-64	4,910	5,490	6,740	...	11.8	22.8
65+	7,540	7,890	8,570	...	4.6	8.6
Hastings District	54,530	53,650	56,380	...	-1.6	5.1
Total NZ European/Other/NZ	3,074,610	3,074,010	3,213,330	...	0.0	4.5
Hawke's Bay Region	119,860	116,720	120,730	...	-2.6	3.4
		Percentage				
0-14	23.4	23.4	22.0	...	0.0	-5.8
15-24	12.6	10.8	11.5	...	-14.3	6.1
25-54	41.2	40.9	39.3	...	-0.7	-3.7
55-64	9.0	10.2	12.0	...	13.6	16.8
65+	13.8	14.7	15.2	...	6.4	3.4
Hastings District	100.0	100.0	100.0	...	...	...
Total NZ European/Other/NZ	13.2	13.8	14.4	...	4.6	4.1
Hawke's Bay Region	14.5	15.5	16.0	...	6.5	3.3

Ratio Labour Market Entrants to Exits (Number aged 15-24 per 10 persons aged 55-64)

	1996	2001	2006	...	1996-2001	2001-2006
		Number			Change (%) over 5 years	
Hastings District	14.0	10.6	9.6	...	-24.6	-9.2
Total NZ European/Other/NZ	15.9	12.7	11.3	...	-20.1	-11.0
Hawke's Bay Region	13.8	10.6	9.2	...	-23.1	-12.8

Ratio Elderly to Children (Number 65+ per Child 0-14)

	1996	2001	2006	...	1996-2001	2001-2006
		Number			Change (%) over 5 years	
Hastings District	0.59	0.63	0.69	...	6.4	9.8
Total NZ European/Other/NZ	0.61	0.65	0.72	...	6.1	10.0
Hawke's Bay Region	0.64	0.69	0.76	...	8.9	9.8

Source: Jackson, N.O (2011) Subnational Ethnic Age Structure Resource 1996, 2001, 2006, NIDEA

Notes: Source data from Stats NZ TableBuilder Estimated Subnational Population (RC,TA,AU) by Age and Sex at 30 June 96,

Notes: Multiple count ethnicity means that people may be counted in more than one ethnic group

Table 4.3.5 provides an overview of each ethnic group's population share by age. As indicated above, the general picture is that the Māori and Pacific Island populations increase their share as age decreases, while the European/New Zealander/Other population increases its share as age increases. The picture is significantly less linear for the Asian population, where the largest shares are concentrated at 15-24 and 25-54 years.

Within that picture, young Māori comprise a fractionally smaller share of Hastings's youthful population than they do of the Hawke's Bay region's youth (30.1 per cent compared with 30.7 per cent), but a somewhat greater share than for Total New Zealand (20.2 per cent). The situation at 15-

24 years is similar. The Asian population, on the other hand, is similarly distributed by age across Hastings and the Hawke's Bay, but in all cases accounts for a much smaller share than nationally.

Table 4.3.5: Ethnic Group* Percentage Share by Age Group and Region, 2006

	Māori	Pacific Island	Asian	MELAA	European/ NZ/Other	Total*	Number*
Hastings District							
0-14	30.0	7.9	2.8	0.5	58.8	100.0	21,090
15-24	29.7	6.8	2.9	0.7	59.8	100.0	10,830
25-54	20.6	4.4	3.2	0.5	71.2	100.0	31,160
55-64	13.2	2.0	1.7	0.1	83.1	100.0	8,115
65+	7.6	1.4	1.1	0.0	90.0	100.0	9,520
Total	22.0	5.0	2.7	0.4	69.9	100.0	80,715
Hawke's Bay Region							
0-14	30.7	5.9	2.4	0.4	60.6	100.0	41,890
15-24	28.9	5.1	2.8	0.5	62.7	100.0	22,075
25-54	20.6	3.1	2.7	0.5	73.1	100.0	64,610
55-64	12.4	1.4	1.5	0.1	84.6	100.0	17,710
65+	7.7	0.8	1.1	0.0	90.3	100.0	21,380
Total	21.7	3.6	2.3	0.4	72.0	100.0	167,665
Total NZ							
0-14	20.2	10.4	7.9	1.0	60.6	100.0	1,064,730
15-24	17.0	8.3	13.1	1.1	60.5	100.0	684,330
25-54	12.4	5.8	10.0	1.0	70.8	100.0	1,870,490
55-64	7.9	3.4	5.6	0.4	82.7	100.0	442,280
65+	4.9	2.2	3.6	0.2	89.0	100.0	520,320
Total	13.6	6.6	8.8	0.8	70.1	100.0	4,582,150

Source: Jackson, N.O (2011) Subnational Ethnic Age Structure Resource 1996, 2001, 2006, NIDEA
Source data: Statistics New Zealand, Estimated Subnational Ethnic Population (RC,TA) by Age and Sex at 30 June
*Notes: *Multiple count ethnicity means that people may be counted in more than one ethnic group*

5.0 Population Projections

5.1 Size, Growth and Population Ageing

Under the medium series assumptions, the population of Hastings is projected to grow steadily, reaching around 80,480 in 2031, an increase of 6.6 per cent (Table 5.1.1). Decline is projected at 0-24 and 40-54 years, offsetting significant growth at 65+ years. The 65+ population is anticipated to grow both numerically (by 80 per cent between 2011 and 2031) and structurally (from 14.1 per cent in 2011 to 23.8 per cent by 2031). Figure 5.1.1 compares these changes under the low and high variant assumptions (see Appendices 3.1-3.4 for projection assumptions).

Table 5.1.1: Projected Population, Hastings District, 2006-2021 (Medium Series)

Hastings District	2006	**2011**	2016	2021	2026	2031	Change (%) 2011-2031
Numbers by age							
0-14	17,500	**17,230**	16,800	16,590	16,090	15,890	-7.8
15-24	9,380	**10,150**	9,840	9,270	9,230	9,150	-9.9
25-39	13,300	**12,320**	12,620	13,440	13,990	13,360	8.4
40-54	15,750	**16,090**	15,350	13,970	13,010	13,340	-17.1
55-64	7,890	**9,070**	9,890	10,600	10,350	9,590	5.7
65-74	4,970	**5,850**	7,270	8,370	9,170	9,870	68.7
75-84	3,240	**3,420**	3,880	4,640	5,840	6,770	98.0
85+	1,150	**1,370**	1,560	1,730	2,050	2,510	83.2
Total	73,180	**75,500**	77,210	78,610	79,730	80,480	6.6
65+	9,360	**10,640**	12,710	14,740	17,060	19,150	80.0

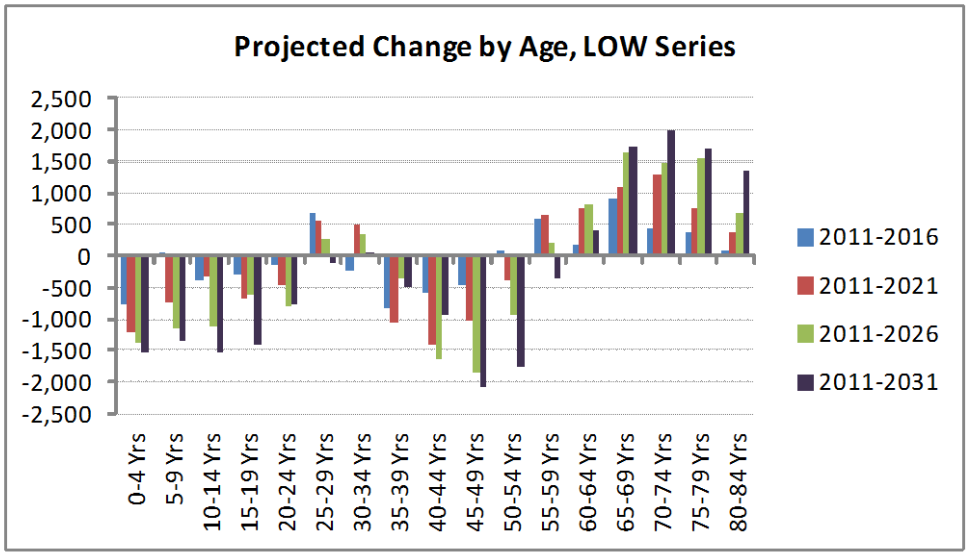
Intercensal Change by Age - Numbers							Change (N)
		2006-2011	2011-2016	2016-2021	2021-2026	2026-2031	2011-2031
0-14	…	**-270**	-430	-210	-500	-200	-1340
15-24	…	**770**	-310	-570	-40	-80	-1000
25-39	…	**-980**	300	820	550	-630	1040
40-54	…	**340**	-740	-1380	-960	330	-2750
55-64	…	**1180**	820	710	-250	-760	520
65-74	…	**880**	1420	1100	800	700	4020
75-84	…	**180**	460	760	1200	930	3350
85+	…	**220**	190	170	320	460	1140
Total	…	**2320**	1710	1400	1120	750	4980
65+		**1280**	2070	2030	2320	2090	8510

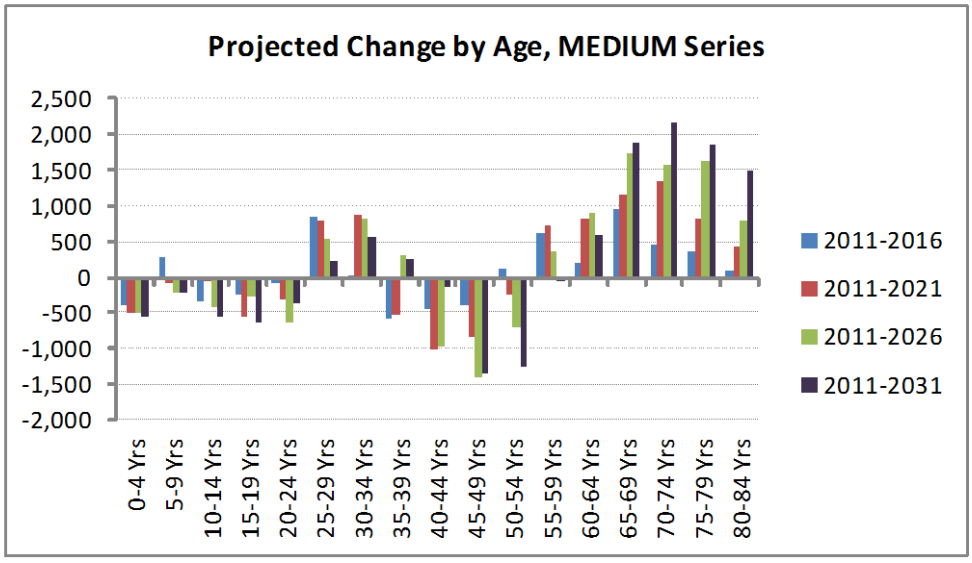
Age Distribution (percentage at each age)							Change (%)
	2006	**2011**	2016	2021	2026	2031	2011-2031
0-14	23.9	**22.8**	21.8	21.1	20.2	19.7	-13.5
15-24	12.8	**13.4**	12.7	11.8	11.6	11.4	-15.4
25-39	18.2	**16.3**	16.3	17.1	17.5	16.6	1.7
40-54	21.5	**21.3**	19.9	17.8	16.3	16.6	-22.2
55-64	10.8	**12.0**	12.8	13.5	13.0	11.9	-0.8
65-74	6.8	**7.7**	9.4	10.6	11.5	12.3	58.3
75-84	4.4	**4.5**	5.0	5.9	7.3	8.4	85.7
85+	1.6	**1.8**	2.0	2.2	2.6	3.1	71.9
Total	100.0	**100.0**	100.0	100.0	100.0	100.0	…
65+	12.8	**14.1**	16.5	18.8	21.4	23.8	68.8

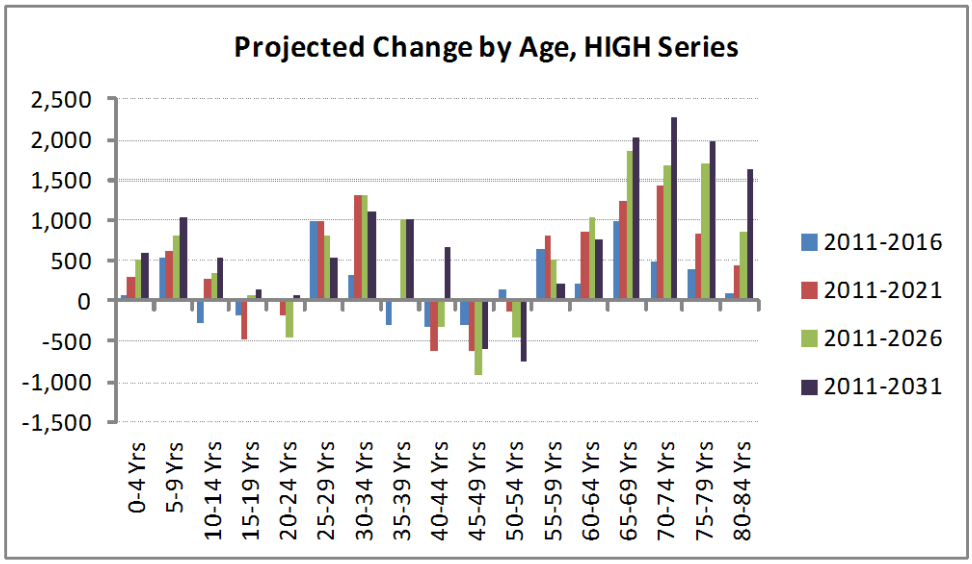
Summary measures							
	2006	**2011**	2016	2021	2026	2031	2011-2031
LM Entrants/Exits							
(15-24/55-64 years)	1.2	**1.1**	1.0	0.9	0.9	1.0	…
(20-29/60-69 years)	1.2	**1.1**	1.0	0.9	0.8	0.8	…
Elderly/Children	0.53	0.62	0.76	0.89	1.06	1.21	…
Reproductive (20-39 yrs)	23.3	22.4	22.2	22.5	22.5	21.8	…
65+	12.8	**14.1**	16.5	18.8	21.4	23.8	…
75+	6.0	**6.3**	7.0	8.1	9.9	11.5	…
Growth (%) - 5 years	…	**3.17**	2.26	1.81	1.42	0.94	6.60
Annual average growth (%	…	0.63	0.45	0.36	0.28	0.19	0.33

Source: Statistics New Zealand, Subnational Population Projections by Age and Sex, 2006(base)-2031 Update

Figure 5.1.1: Projected Population Change by Age and Projection Series, Hastings District



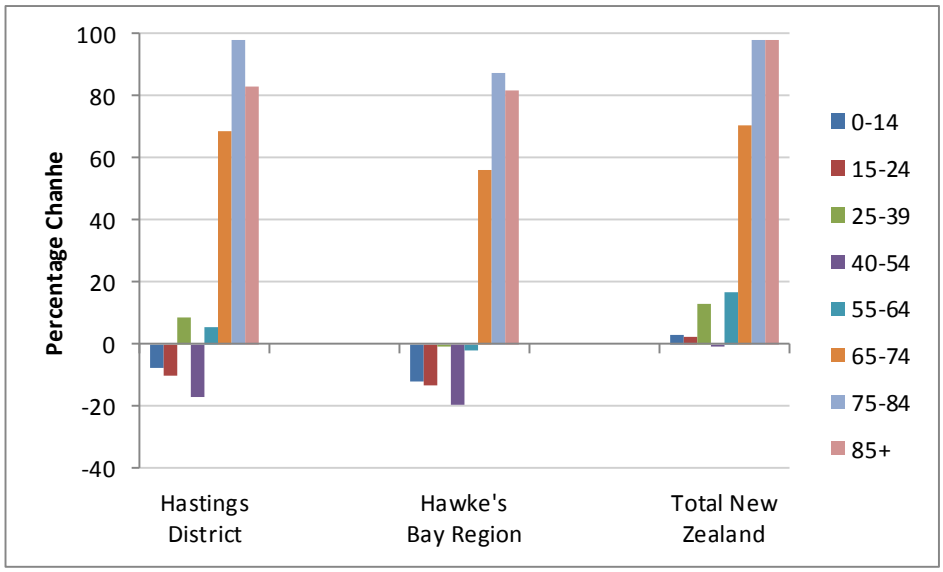




As would be expected, Figure 5.1.1 shows that the losses by age are greater under the low variant assumptions, and lower under the high variant assumptions. However, even under the high series assumptions, loss is projected for several age groups.

With the exception of a small gain for Hastings District at 25-39 years, similar losses and gains across the same age groups are also projected for the Hawke's Bay region (Figure 5.1.2 and Table 5.1.2). No losses at the younger ages are projected for Total New Zealand, although the projected gains are minimal. Trends at the older ages differ slightly, but in all cases show substantial growth, with that at 75-84 years fractionally greater for Hastings than for both the Hawke's Bay and Total New Zealand.

Figure 5.1.2: Projected Change (%) in Numbers by Broad Age Group, Hastings District, Hawke's Bay Region and Total New Zealand 2011-2031, Medium Series



Source: Statistics New Zealand, Subnational Population Projections by Age and Sex, 2006(base)-2031 Update

Table 5.1.2: Projected Change (%) in Numbers by Broad Age Group, Hastings District, Hawke's Bay Region and Total New Zealand, 2011-2031, Medium Series

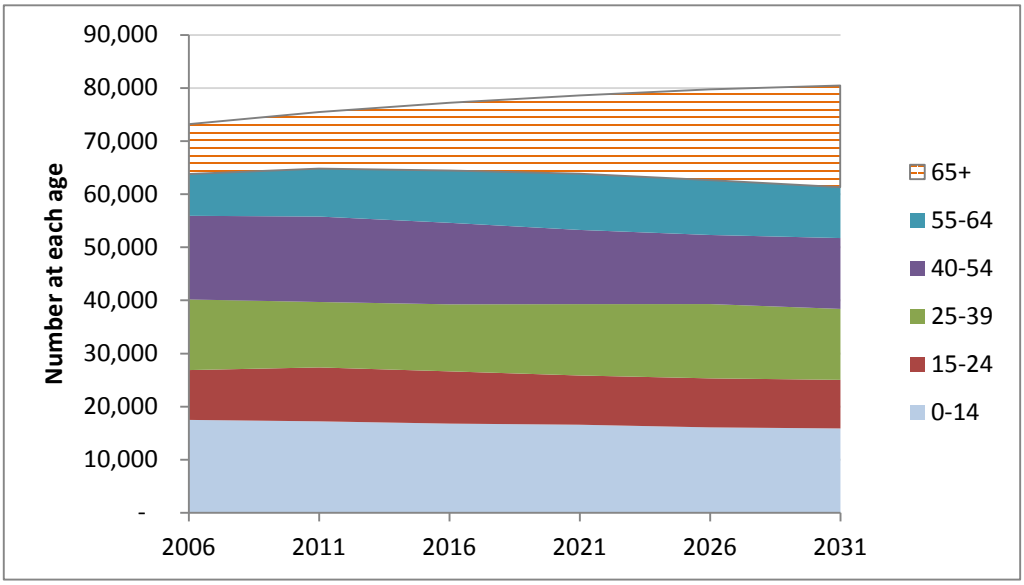
	Hastings District	Hawke's Bay Region	Total New Zealand
0-14	-7.8	-11.8	3.2
15-24	-9.9	-13.0	2.2
25-39	8.4	-0.5	12.7
40-54	-17.1	-19.3	0.0
55-64	5.7	-1.8	16.9
65-74	68.7	56.1	70.7
75-84	98.0	87.4	97.9
85+	83.2	82.0	98.1
Total	6.6	2.0	16.3
65+	80.0	69.6	82.8

Source: Statistics New Zealand, Subnational Population Projections by Age and Sex, 2006(base)-2031 Update

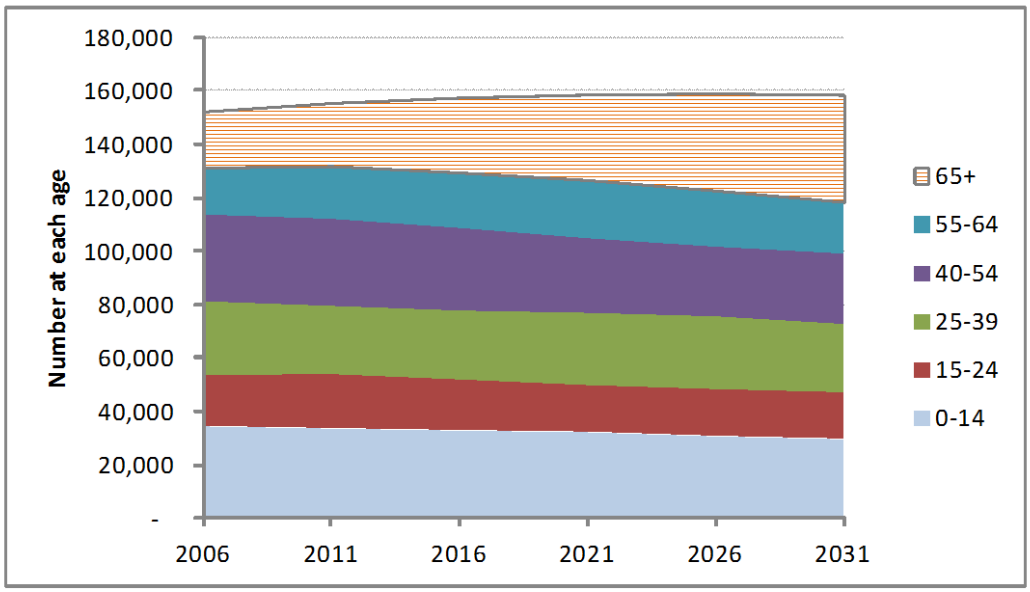
Figure 5.1.3 provides a summary overview of the changes by broad age group. The populations of Hastings and the Hawke's Bay clearly grow overall, but virtually all of that growth is at 65+ years.

Figure 5.1.3: Projected Change in Numbers by Broad Age Group, Hastings District and Hawke's Bay Region, 2006-2031, Medium Series

Hastings District



Hawke's Bay Region



Source: Statistics New Zealand, Subnational Population Projections by Age and Sex, 2006(base)-2031 Update

5.2 Projections by Ethnicity

While counting population by ethnicity is difficult, projecting populations based on ethnic affiliation is even more difficult. The following projections have many caveats attached to them and should be read as indicative only. Among them is the high degree of rounding of numbers involved, and that some ethnic groups are not projected for some areas because of small cell sizes by age.

Table 5.2.1 shows the European/Other population of Hastings increasing slightly (1.0 per cent) between 2011 and 2021 against an 11.6 per cent increase for Māori. The percentage increases projected for the Pacific Islands and Asian populations (27.7 and 30.8 per cent respectively) are somewhat larger, partly reflecting their smaller bases.

Table 5.2.1: Population Projections for Hastings District by Ethnic Group and Broad Age Group

	Population[2, 3] by age group (years) at 30 June					Projected components of population change, five years ended 30 June					Median age[5] (years) at 30 June
Hastings district	0–14	15–39	40–64	65+	All ages	Births	Deaths	Natural increase	Net migration	Inter-ethnic mobility [4]	
European/Other											
1996	12,800	18,400	15,800	7,500	54,600	...	...	...	...	...	35.3
2001	12,500	15,900	17,300	7,900	53,600	...	...	...	...	...	37.9
2006 (base)	12,400	16,100	19,300	8,600	56,400	...	...	...	...	...	39.6
2011	**12,000**	**15,400**	**20,400**	**9,600**	**57,400**	**3700**	**2300**	**1400**	**-400**	**0**	**41.6**
2016	11,500	14,800	20,200	11,300	57,800	3400	2500	900	-500	0	43.6
2021	11,200	14,400	19,500	12,900	58,000	3300	2600	600	-500	0	45.5
Change 2011-2021 (%)	**-6.7**	**-6.5**	**-4.4**	**34.4**	**1.0**	...	...	...	...	...	...
Māori											
1996	6,300	6,800	3,000	500	16,800	...	...	...	...	...	21.2
2001	6,500	6,700	3,400	600	17,200	...	...	...	...	...	21.4
2006 (base)	6,300	6,600	4,100	700	17,800	...	...	...	...	...	22.6
2011	**6,600**	**7,000**	**4,500**	**900**	**19,000**	**2500**	**500**	**2000**	**-600**	**-300**	**22.6**
2016	7,000	7,300	4,700	1,100	20,100	2500	500	2000	-500	-300	23.4
2021	7,300	7,800	4,800	1,500	21,200	2500	600	1900	-500	-300	24.2
Change 2011-2021 (%)	**10.6**	**11.4**	**6.7**	**66.7**	**11.6**	...	...	...	...	...	...
Pacific Islands											
1996	1,100	1,100	400	100	2,700	...	...	...	...	...	19.0
2001	1,500	1,400	600	100	3,600	...	...	...	...	...	19.7
2006 (base)	1,700	1,500	700	100	4,100	...	...	...	...	...	19.4
2011	**2,000**	**1,700**	**900**	**100**	**4,700**	**800**	**100**	**700**	**-100**	**0**	**18.8**
2016	2,300	1,900	1,000	100	5,300	800	100	700	-100	0	18.7
2021	2,500	2,300	1,000	200	6,000	900	100	800	-100	-100	19.0
Change 2011-2021 (%)	**25.0**	**35.3**	**11.1**	**100.0**	**27.7**	...	...	...	...	...	...
Asian											
1996	300	500	300	-	1,100	...	...	...	...	...	28.3
2001	400	700	400	100	1,600	...	...	...	...	...	29.3
2006 (base)	600	900	600	100	2,100	...	...	...	...	...	29.2
2011	**700**	**1,000**	**700**	**200**	**2,600**	**300**	**0**	**200**	**200**	**0**	**29.6**
2016	900	1,100	800	200	3,000	300	0	300	200	0	30.4
2021	1,000	1,300	900	300	3,400	300	100	300	200	0	31.1
Change 2011-2021 (%)	**42.9**	**30.0**	**28.6**	**50.0**	**30.8**	...	...	...	...	...	...

Source: Statistics New Zealand, Subnational Ethnic Population Projections (2006 Base - 2009 Update) Tables 4e, 4m, 4p, 4a

(1) Boundaries at 30 June 2009.

(2) These projections have as a base the estimated resident population of each ethnicity, of each area, at 30 June 2006 and incorporate medium fertility, medium migration, medium mortality, and medium inter-ethnic mobility assumptions for each area. Population estimates for 1996–2006 are derived from the respective 1996–2006 census usually resident population counts.

(3) Numbers reflect the multiple count enumeration methodology and their sum is somewhat greater than the total projection for the TA. Projections are not available for all ethnic groups for all TA's.

(4) The net effect of people changing their ethnic identity.

(5) Half the population is younger, and half older, than this age.

In all cases, natural increase is the primary driver of growth, and for all but the Asian population, offsets accompanying net migration loss. For Māori, natural increase is already somewhat larger than for European/Other in absolute terms (in 2011, 2,000 compared with 1,400). There are also marked differences by age. The 65+ year European/Other population is projected to increase by 34.4 per cent, compared with 66.7 per cent for Māori, while sizeable decline is projected for the European/Other population at all other ages, against sizeable increase for all other population/age groups (data for the Pacific Islands and Asian populations are too rounded to be analysed in detail).

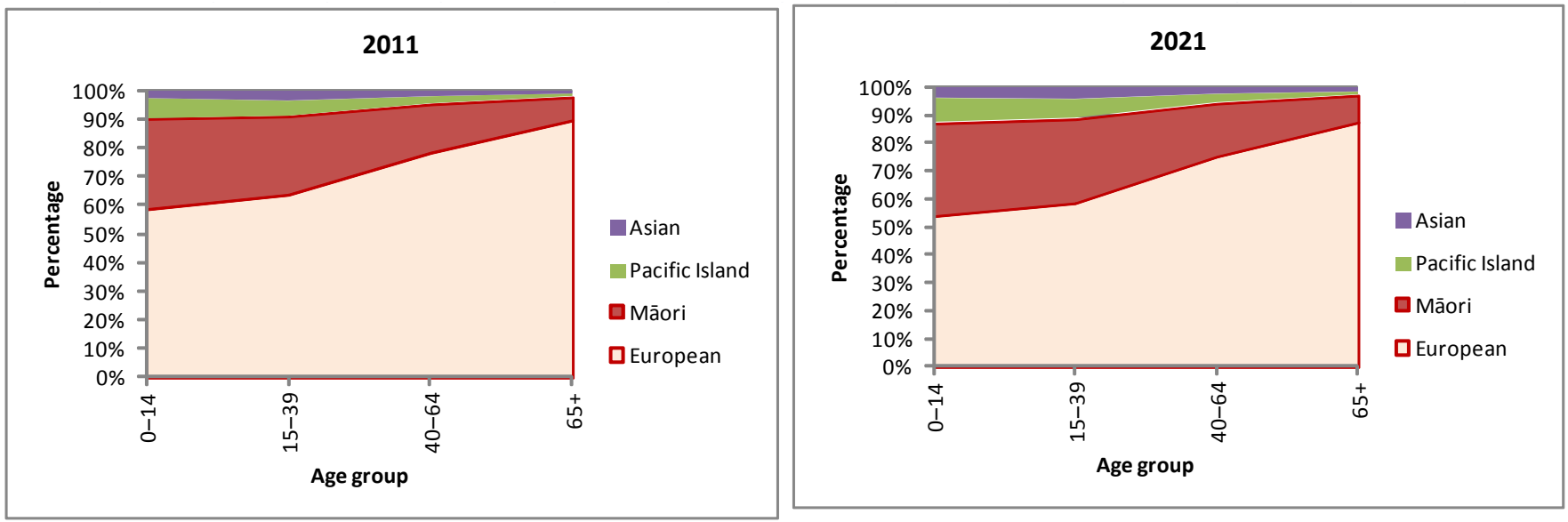
Figure 5.2.1 gives an overview for the Hawke's Bay region (see Appendix 3.5 for the underlying assumptions and related information). The data suggest that there will be relatively little change in the overall ethnic composition of the region over time, albeit as was shown for Hastings, the share currently held by the European/Other population will diminish for all age groups. By 2021, the European/Other population is projected to account for little more than two-thirds of the total Hawke's Bay population (down from 71 per cent in 2011), while Māori will comprise approximately one-quarter (up from 22 per cent). The changes will be most pronounced at the younger ages.

Table 5.2.2: Projected Distribution by Age and Ethnic Group*, Hawke's Bay Region

	0–14	15–39	40–64	65+	All ages
2011					
European	58.8	63.9	78.6	90.0	70.9
Māori	31.5	27.3	16.8	7.9	22.4
Pacific Island	6.8	5.1	2.4	0.8	4.1
Asian	2.8	3.7	2.2	1.3	2.7
Total	100.0	100.0	100.0	100.0	100.0
Number	42,500	51,300	54,700	23,900	172,400
2016					
European	56.4	60.9	76.9	89.1	69.3
Māori	32.3	28.8	17.9	8.8	23.1
Pacific Island	7.9	5.9	2.7	0.7	4.6
Asian	3.5	4.3	2.4	1.4	3.0
Total	100.0	100.0	100.0	100.0	100.0
Number	43,300	50,700	54,600	28,400	176,700
2021					
European	54.1	58.8	75.4	87.7	67.7
Māori	33.1	30.0	18.9	9.6	23.8
Pacific Island	8.7	6.7	3.0	0.9	5.1
Asian	4.1	4.5	2.6	1.9	3.4
Total	100.0	100.0	100.0	100.0	100.0
Number	43,800	50,700	52,900	32,400	180,100

Source and Notes: same as Table 5.2.1

Figure 5.2.1: Projected Population of the Hawke's Bay Region by Major Ethnic Group* and Broad Age Group, 2011 and 2021



Source: Statistics New Zealand, Subnational Ethnic Population Projections (2006 Base - 2009 Update) Tables 3e, 3m, 3p, 3a

(1) Boundaries at 30 June 2009.

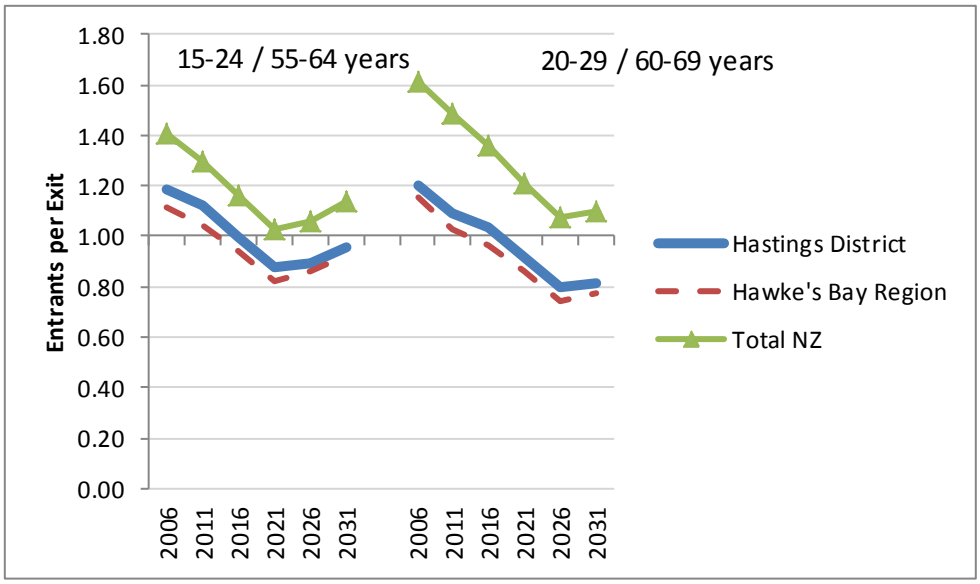
*(2) *These projections have as a base the estimated resident population of each ethnicity, of each area, at 30 June 2006 and incorporate medium fertility, medium migration, medium mortality, and medium inter-ethnic mobility assumptions for each area. Population estimates for 1996–2006 are derived from the respective 1996–2006 census usually resident population counts.*

5.3 Labour Market Implications of Changing Age Structure

As noted earlier, population ageing drives other important changes. One of the most important is change in the ratio of people at labour market entry age to those at 'exit' age. As noted, various age groupings can be employed to calculate this ratio; here I use two: people aged 15-24 to those aged 55-64 years, and people aged 20-29 to those aged 60-69 years (Figure 5.3.1). Based on the first of these indices, Hastings can expect to have fewer 'entrants' than 'exits' from around 2016, reaching a low point of 0.9 (nine entrants per ten exits) between 2021 and 2026, then rising again to almost 1.0 (see also Table 5.1.1 above). When the ratio is based on those aged 20-29 and 60-69 years, it similarly falls below one around 2016 and as low as 0.8 in 2026 and 2031.

Trends are very similar for the Hawke's Bay region, but falling fractionally lower at each observation (see also Appendix 3.3). For Total New Zealand the ratios similarly decline, but do not fall below one during the projection period (Appendix 3.4). All are of course linked, however, in a national (and international) labour market that will see increased competition for the participation of the young and greater need to encourage retention of older workers. This demographically tight labour market will have significant implications for labour costs as it unfolds. This will be particularly so for industries which have older age structures and are ageing faster than average, as outlined in the following special topic (Section 6.0).

Figure 5.3.1: Projected Ratio of People at Labour Market Entry Age to Those Approaching Exit Age, Hastings District, Hawke's Bay Region and Total New Zealand, 2006-2031

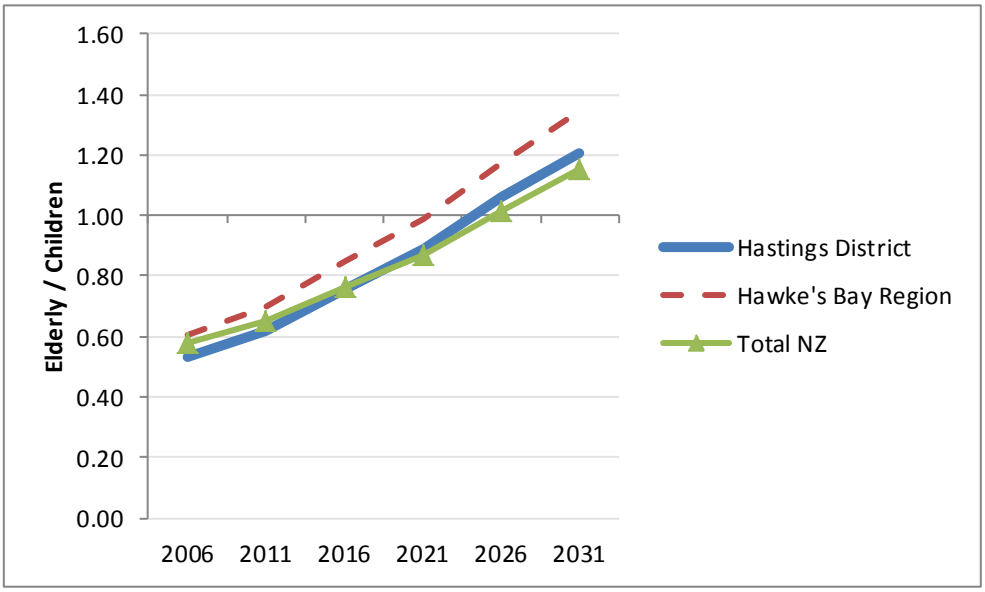


Source: Statistics New Zealand, Subnational Population Projections by Age and Sex, 2006(base)-2031 Update

5.4 Natural Increase Implications of Changing Age Structure

For Hastings, the projected ratio of elderly (65+ years) to children (0-14 years) increases rapidly from its present 0.53 (five elderly for every ten children), to 1.21 by 2031 (Figure 5.4.1). This profound shift to more elderly than children (cross over for Hastings around 2026) will by then be contributing to rapidly diminishing levels of natural increase (Figure 5.4.2), as will the relatively small proportion projected to be at the key reproductive ages (21-22 per cent) compared with Total New Zealand (25-27 per cent) (Figure 5.4.3). For Hawke's Bay the cross over to more elderly than children will occur a little earlier, around 2021, and for Total New Zealand, like Hastings around 2026 (see also Appendices 3.3 and 3.4).

Figure 5.4.1: Projected Ratio of Elderly (65+ Years) to Children (0-14 Years), Hastings District, Hawke's Bay Region and Total New Zealand, 2006-2031

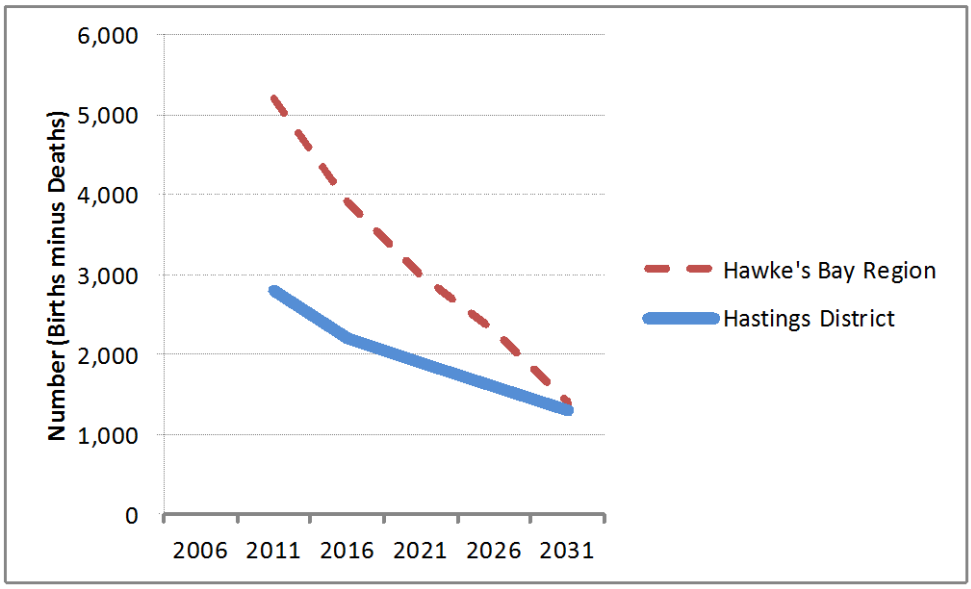


Source: Statistics New Zealand, Subnational Population Projections by Age and Sex, 2006(base)-2031 Update

The proportion at key reproductive ages (Figure 5.4.3) appears to be a particularly critical indicator of future growth. In 2010, 15 of New Zealand's 67 Territorial Authorities (22 per cent) had either stopped growing or declined in size (Jackson 2011: 20). All had proportions aged 20-39 years lower than the national average (then 26.9 per cent), and thereby severe 'hour-glass' shaped age structures which are no longer conducive to sustained natural growth. Referring back to Section 2,

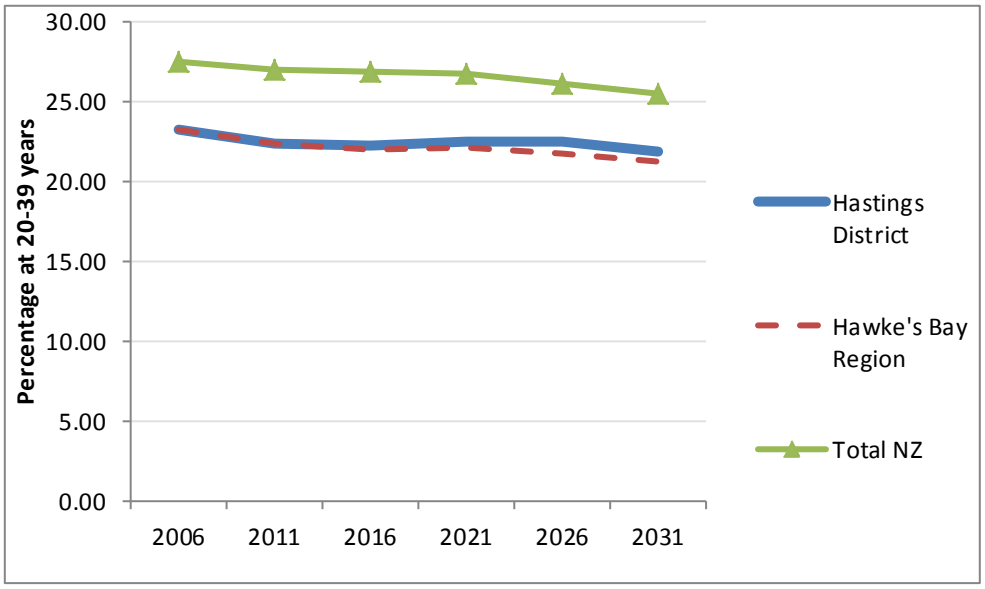
natural increase is currently the major component of Hastings' growth. As that component declines, growth – or maintenance of population size - will become ever more dependent on migration.

Figure 5.4.2: Projected Natural Increase, Hastings District and Hawke's Bay Region, 2006-2031



Source: Statistics NZ Subnational Projected Population Characteristics, 2006(base)-2031 Update

Figure 5.4.3: Projected Proportion at Key Reproductive Ages (20-39 Years), Hastings District, Hawke's Bay Region and Total New Zealand, 2006-2031



Source: Statistics New Zealand, Subnational Population Projections by Age and Sex, 2006(base)-2031 Update

6.0 Industrial Change – Special Topic 1

6.1 Industrial Age-Sex Structures (1996, 2001, 2006)

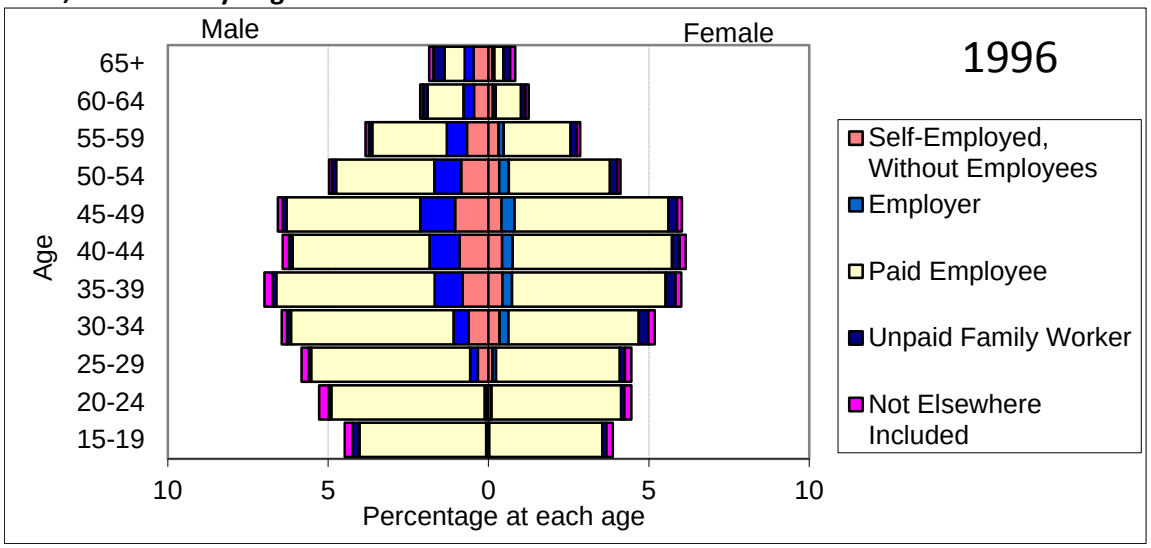
The extent (and speed) of population ageing and its impact on Labour Market entry/exit ratios also differs by industry. Industries which employ large proportions of younger people, such as supermarkets and grocery stores, by definition have youthful age structures; those employing large proportions of older people (especially in senior management positions) have older age structures. However industrial employment patterns by age are not of interest simply because they differ, but rather, in the context of population ageing, they provide important information for issues such as future labour supply and succession planning.

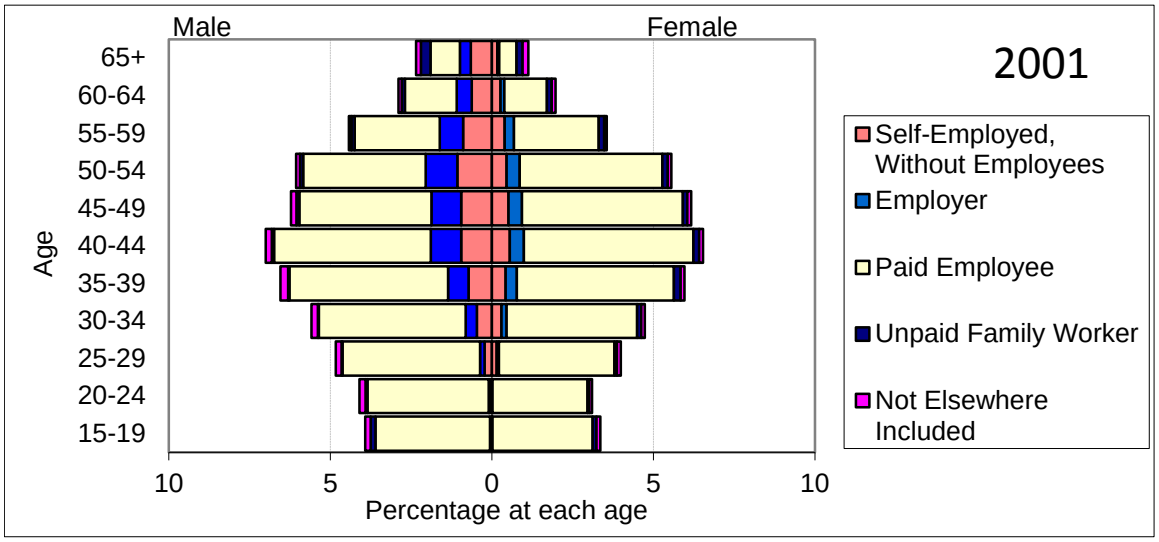
This section provides an overview of the changing age-sex structure of the Hawke's Bay Region's employed labour force by employment status (self-employed, employer, paid employee etc.,), first for the total labour force, then for the region's five largest industries at the three digit level: School Education; Horticulture and Fruit Growing; Grain, Sheep and Beef Farming; Meat and Meat Product Manufacturing; and Community Care Services (see also Appendix 4). The data have been customised by Statistics New Zealand to be consistent in terms of industry and employment status across time.

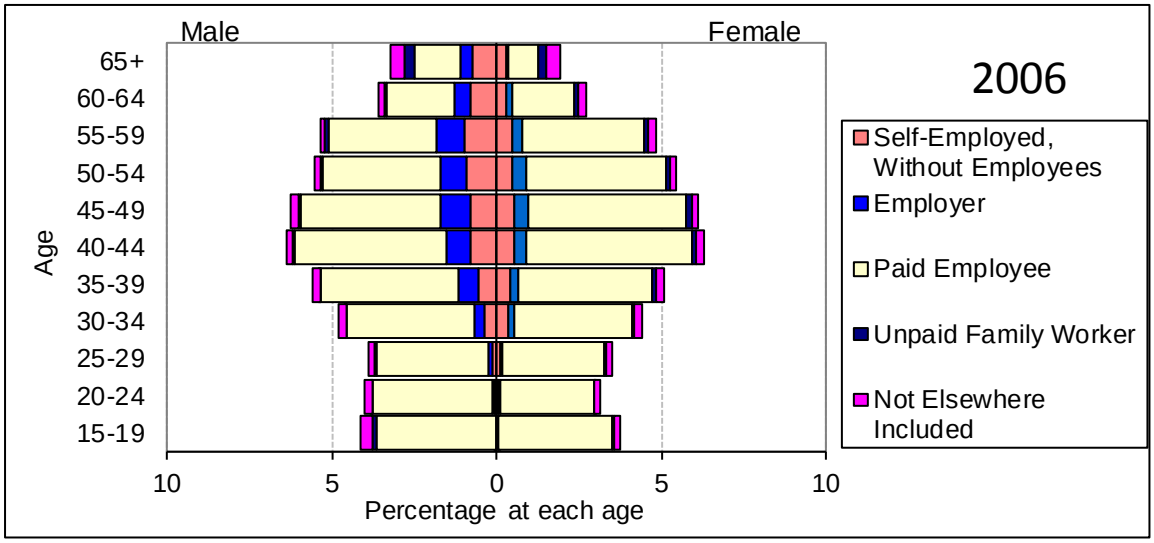
Figure 6.1.1 provides data for the Hawke's Bay Region's total employed labour force. Reflecting the trends outlined above, the average age of employed persons at each census was respectively 39.1, 41.2 and 42.4 years (see Appendix 4.1 for average age by employment status), an overall increase of 3.4 years (8.7 per cent). By comparison the average age for the Total New Zealand employed labour force at each observation was 38.3, 40.1 and 41.2 years (2.9 years, 7.6 per cent). As might be expected, employers and the self-employed tend to have the oldest average ages, around nine years greater than paid employees, with those from the Hawke's Bay Region a year or two older than for New Zealand generally.

A significant departure from the picture for the total employed labour force is that for the region's single largest industrial grouping, School Education (ANZSIC96 V4.1 code N842), which is heavily feminised and – as would be expected - contains very few people enumerated as anything other than paid employees (Figure 6.1.2). The average age of persons in the Hawke's Bay employed in this industry (46.7 years in 2006) is around four years greater than the region's total labour force, and has shifted upwards since 1996 by 3.6 years (8.5 per cent). This is a somewhat greater rate of structural ageing than for the Total New Zealand School Education labour force (Appendix 4.2).

Figure 6.1.1: Age-Sex Structure and Employment Status of Employed Labour Force 1996, 2001, 2006, Hawke's Bay Region

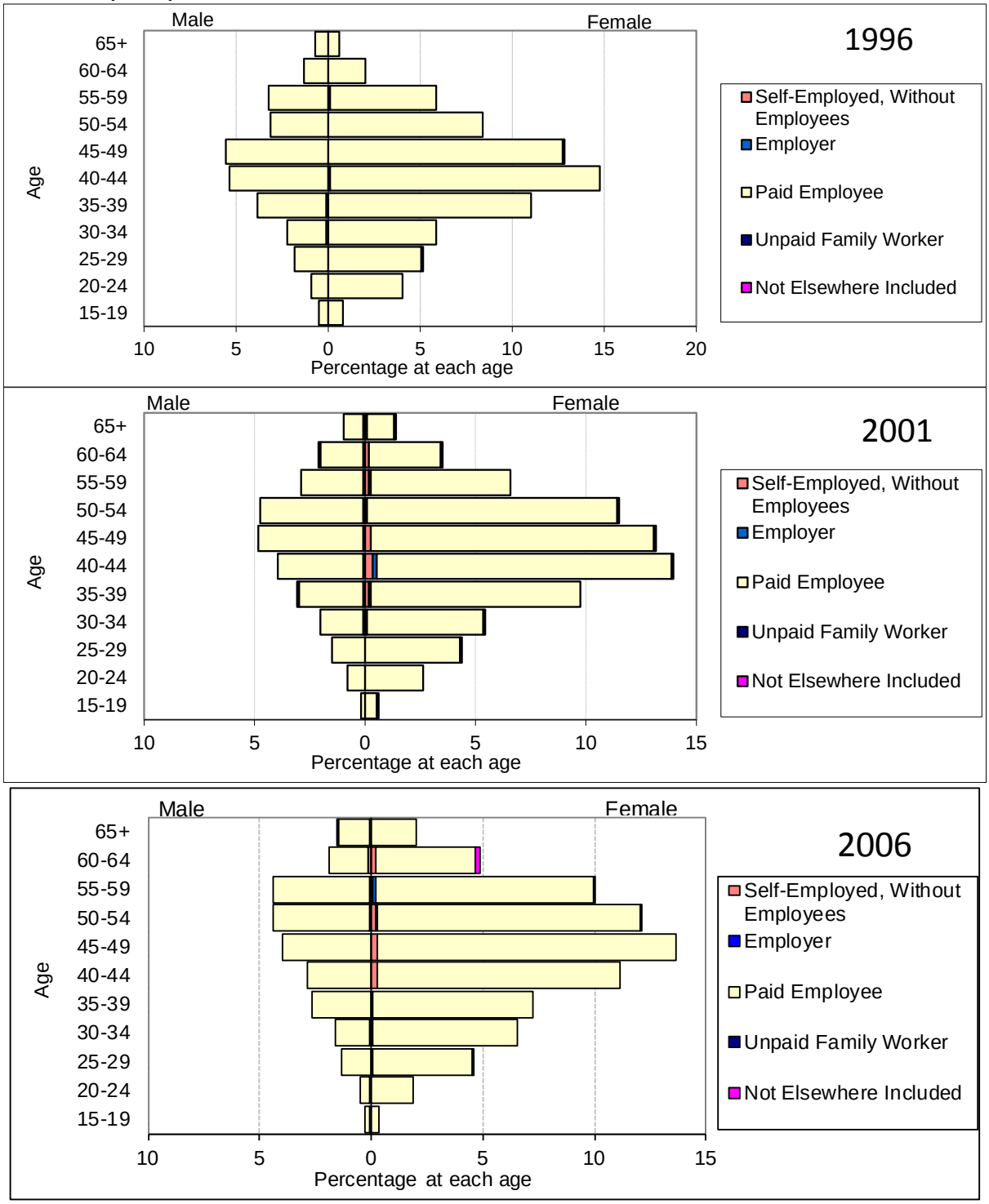






Source: Statistics NZ Customised Database,
Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15 Years and Over, 1996, 2001, 2006

Figure 6.1.2: Age-Sex Structure of Major Industries 1996, 2001, 2006, Hawke's Bay Region: School Education (N842)



Source: Statistics NZ Customised Database,
Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15 Years and Over, 1996, 2001, 2006

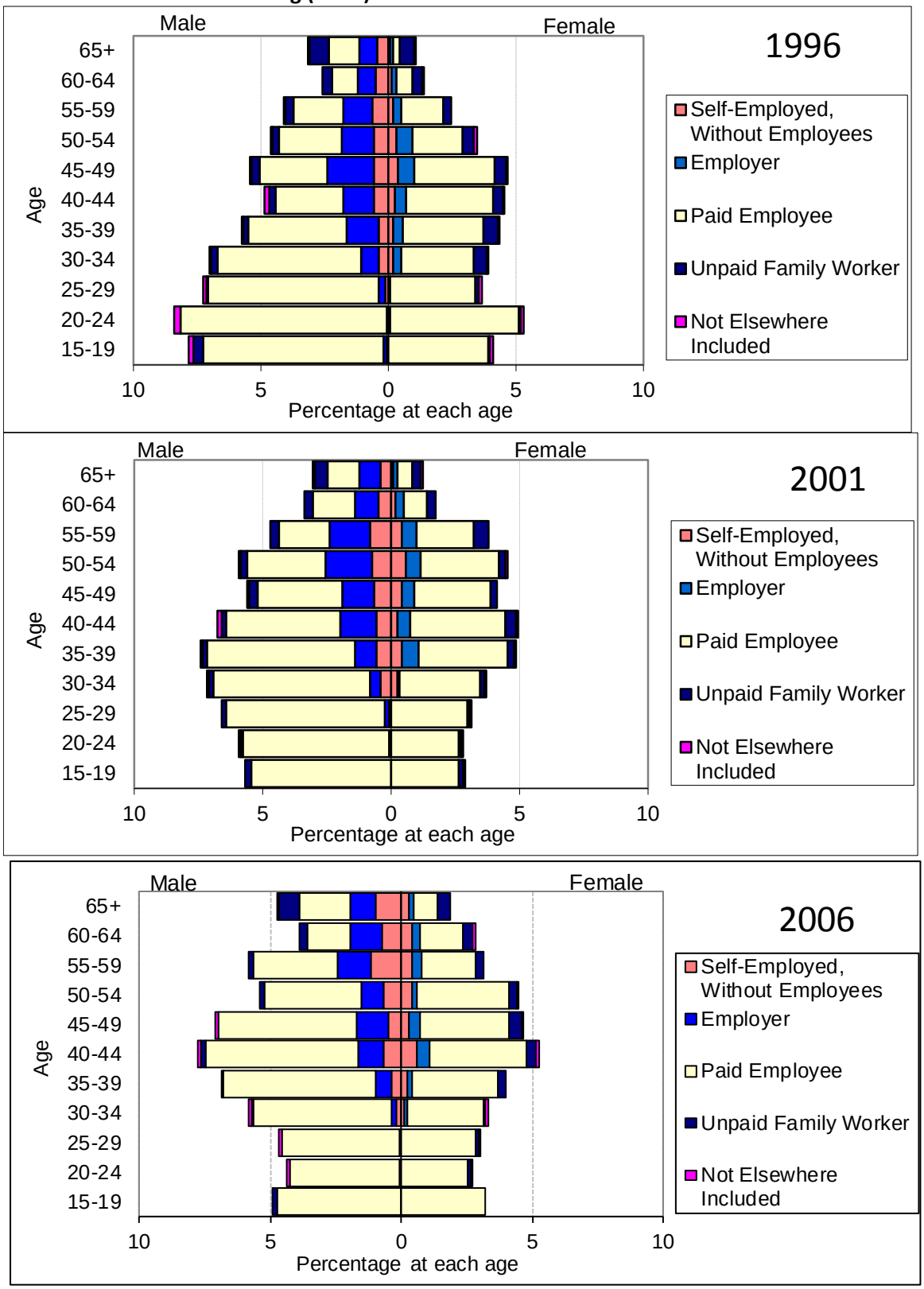
While structurally younger, substantial ageing is also evident in the Hawke's Bay's second largest industry (in 2006 employing 3,084), Horticulture and Fruit Growing (Figure 6.1.3, Appendix 4.3). The average age of Hawke's Bay employees in this somewhat masculinised industry is similar to the region's total employed labour force, but it is ageing faster, increasing from 37.8 years in 1996 to 40.5 years in 2006 (4.7 years, 12.5 per cent). Employees are around 2 years younger than the New Zealand average for this industry. At the same time, Hawke's Bay employers tend to be a little older than the New Zealand average for the industry, and the self-employed, a little younger.

Also dominated by males, the Grain, Sheep and Beef Cattle Farming industry is the region's third largest, in 2006 employing 3,036 people (Figure 6.1.4). Its age-sex structures contrast significantly with those for Horticulture and Fruit Growing. Generally understood as one of the older industries (in terms of age structure), the average age of Hawke's Bay's Grain, Sheep and Beef farmers increased from 43.5 years in 1996 to 46.5 years in 2006 (7.0 per cent). In 1996 this meant that the region's farmers were a little older on average than their New Zealand counterparts, but in 2001 and 2006 a little younger (Appendix 4.4). Again however the region's employers in this industry were older than those across the rest of the country. The relatively small proportion of paid employees at the younger ages *vis-à-vis* the bulk of employers at older ages has significant implications for succession of these farms.

Somewhat younger in age structure – but nevertheless ageing as well, and also heavily male dominated - is the Hawke's Bay region's Meat and Meat Product Manufacturing industry (Figure 6.1.5), in 2006 employing around 2,460 people (the region's 5th largest). Similar to the total employed labour force of the region, the average age of employees in this industry is 2006 was 41.1 years, having increased by 3.1 years (8.1 per cent) since 1996 (Appendix 4.5). Of note is that this industry has relatively few employers or self-employed living in the Hawke's Bay region; however this situation is similar across Total New Zealand.

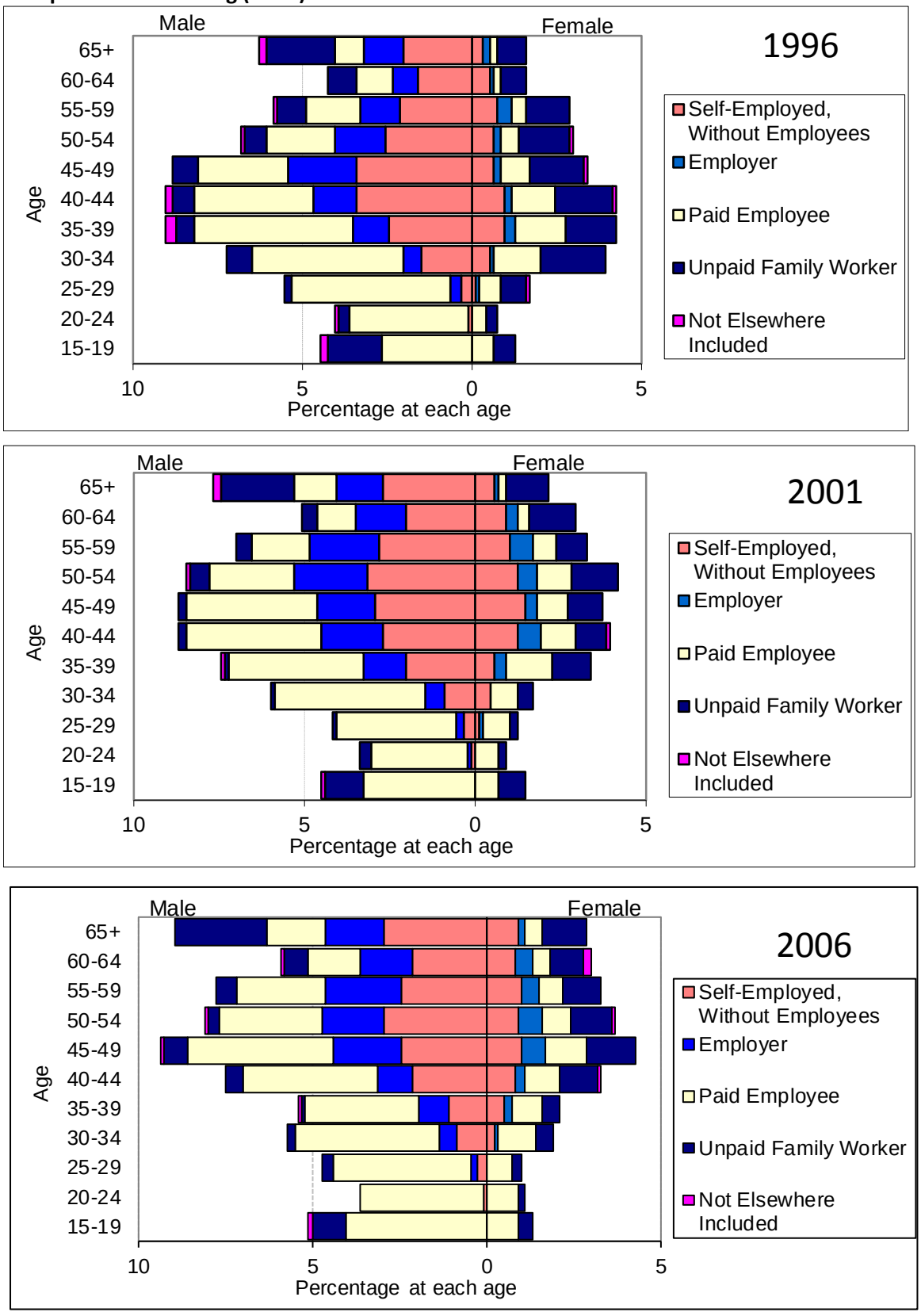
Contrasting completely with the large male dominated industries is Community Care Services. Like School Education, this industry is disproportionately staffed by females (Figure 6.1.6, Appendix 4.6). The extent and speed of ageing in this industry is also more profound than in general, the average age of 47.6 years in 2006 having increased by 6.5 years since 1996, almost 16 per cent.

Figure 6.1.3: Age-Sex Structure of Major Industries 1996, 2001, 2006, Hawke's Bay Region: Horticulture and Fruit Growing (A011)



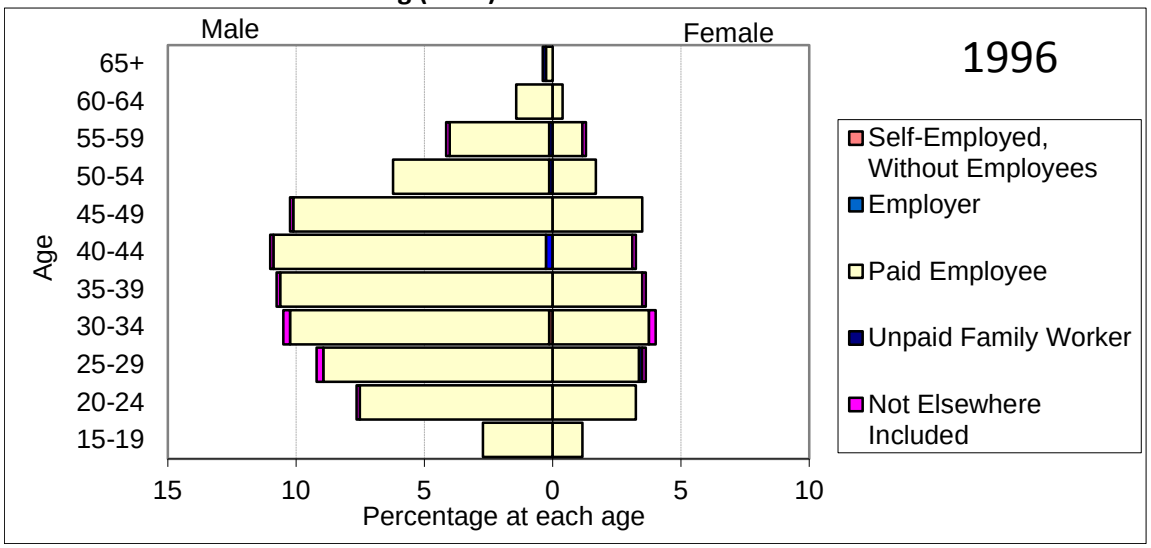
Source: Statistics NZ Customised Database,
Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15 Years and Over, 1996, 2001, 2006

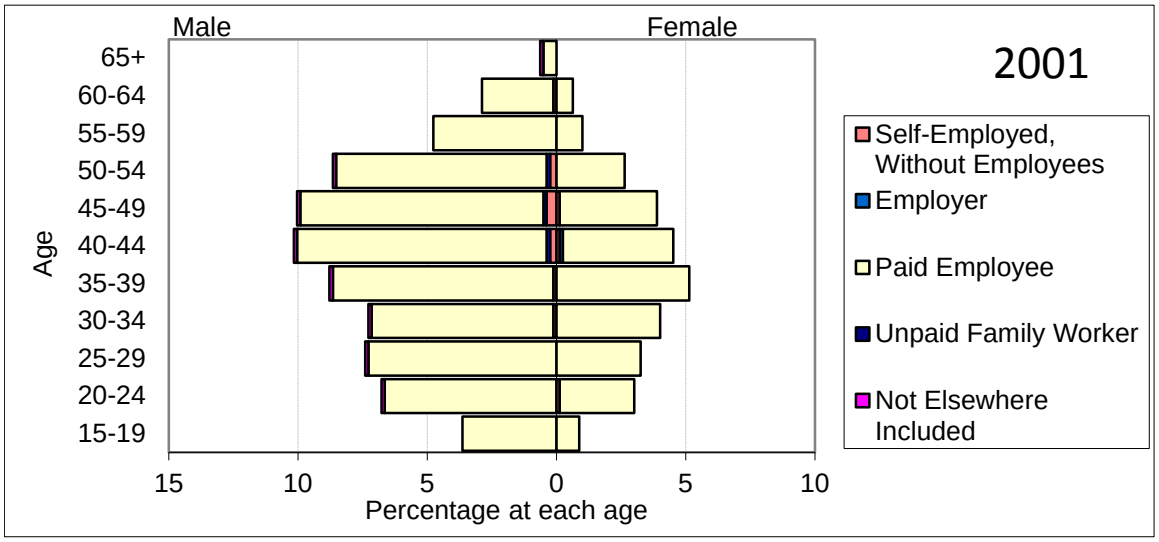
Figure 6.1.4: Age-Sex Structure of Major Industries 1996, 2001, 2006, Hawke's Bay Region: Grain, Sheep and Beef Farming (A012)

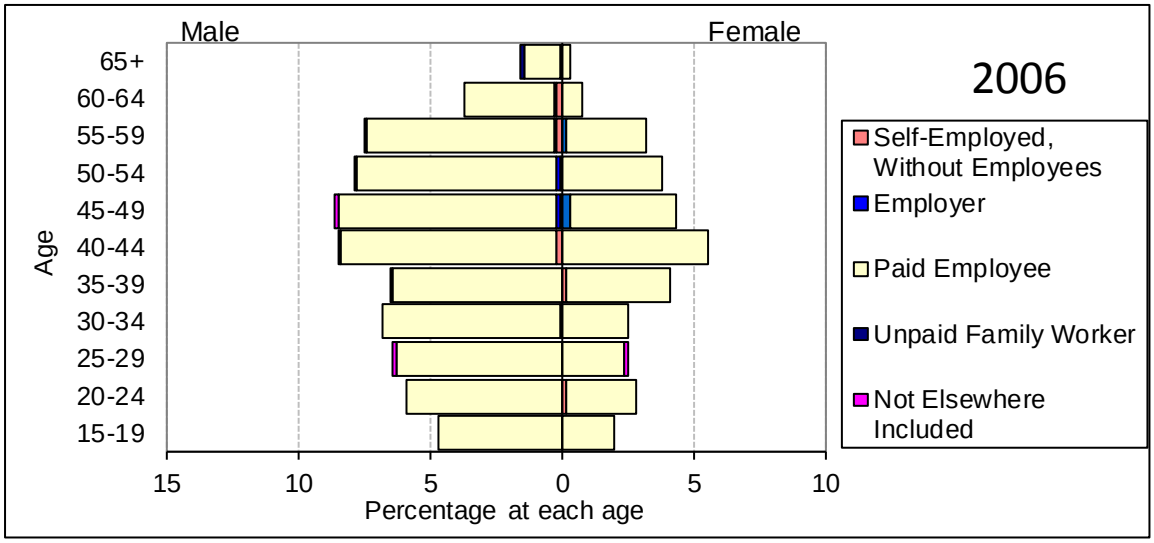


Source: Statistics NZ Customised Database,
Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15 Years and Over, 1996, 2001, 2006

Figure 6.1.5: Age-Sex Structure of Major Industries 1996, 2001, 2006, Hawke's Bay Region: Meat and Meat Product Manufacturing (C211)

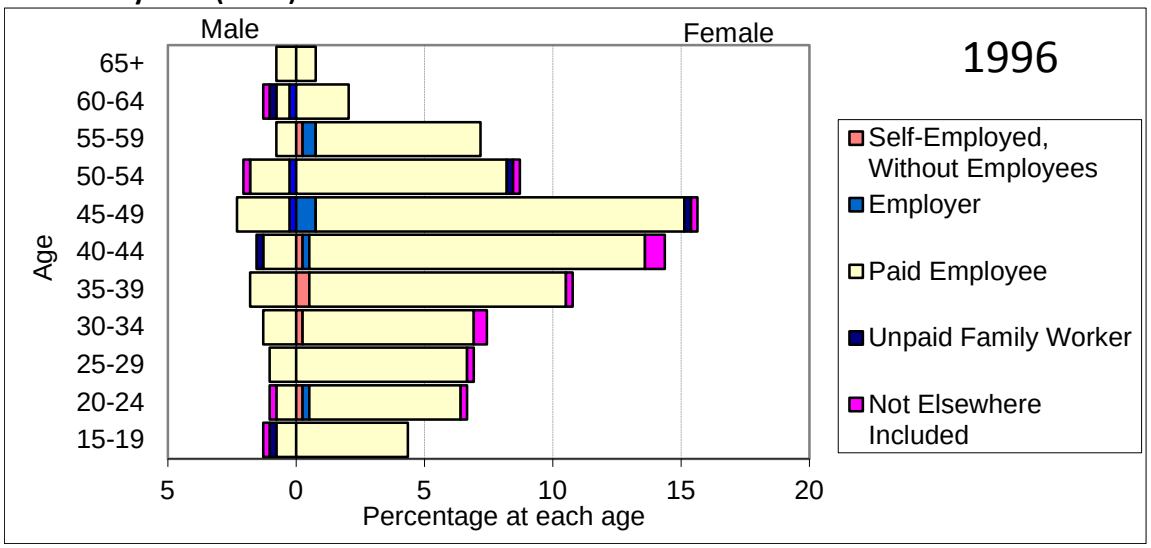


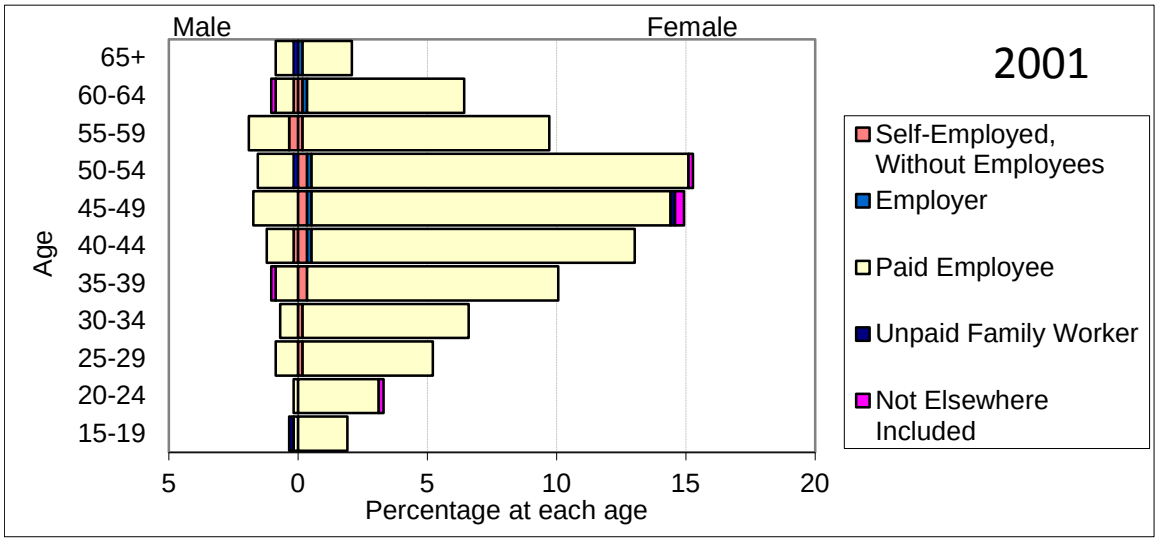


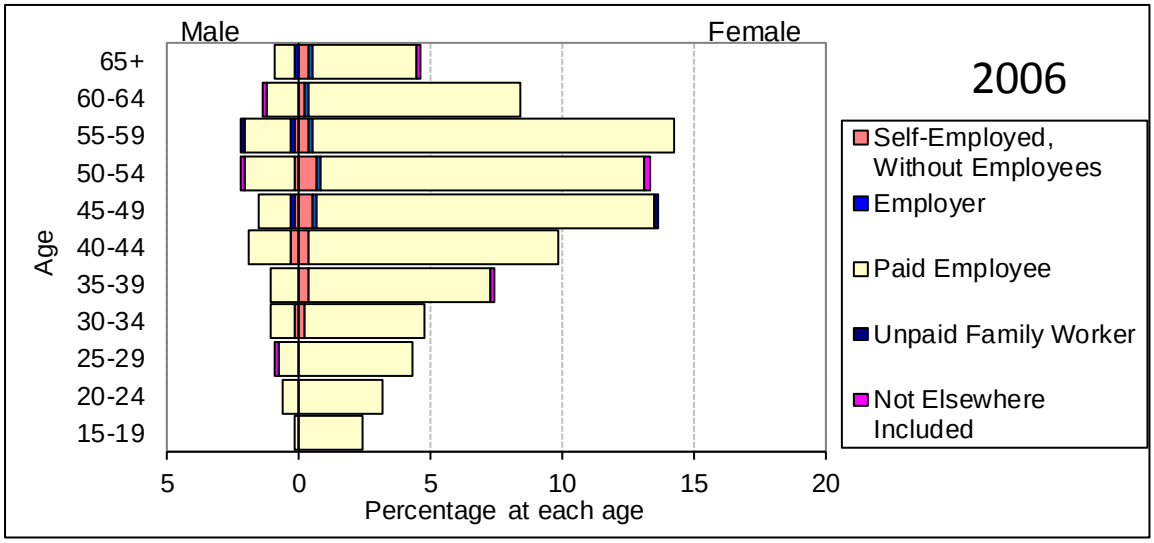


Source: Statistics NZ Customised Database,
Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15 Years and Over, 1996, 2001, 2006

Figure 6.1.6: Age-Sex Structure of Major Industries 1996, 2001, 2006, Hawke's Bay Region: Community Care (O872)







Source: Statistics NZ Customised Database,
Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15 Years and Over, 1996, 2001, 2006

Drawing on the 'entry/exit ratio' index, Table 6.1.1 provides a summary perspective on these trends, including also data for all industries with more than 1,000 employed persons in the Hawke's Bay Region (together accounting for half of the region's employed persons) (see also Appendix 4.7).

The data show the ratio of people employed in the labour market entry ages (15-24 years) to those in the retirement zone (55-64 years) for each of the selected industries. Notable are the extremely low 2006 ratios for some industries, such as 0.1 for School Education (one person at 15-24 years for every 10 at 55-64 years), Community Care Services (0.2) and Other Health Services (0.2) for the Hawke's Bay region. These ratios will of course reflect the relatively low proportions of people at younger ages with relevant qualifications or experience; however in each case they are lower than for Total New Zealand, and most have declined at a faster rate. Other industries with ratios already well below 1.0 (ie, ten entrants per ten exits) are Grain, Sheep and Beef Farming (0.6), Hospitals and Nursing Homes (0.3), Government Administration (0.3), Other Business Services (0.7) and Marketing and Business management Services (0.6). In some cases these are also below those for Total New Zealand (eg., Government Administration, Other Business Services, and Marketing and Business Management Services), but in others they are above. Either way, they point to an urgent need to engage with the rapid ageing of, and succession planning within, many local industries.

Table 6.1.1: Ratio of People at Labour Market Entry Age (15-24) to Exit Age (55-64) in Industries Employing over 1,000 persons, Hawke's Bay Region and Total New Zealand, 1996 and 2006

	Hawke's Bay Region			Total New Zealand		
	1996	2006	Change (%)	1996	2006	Change (%)
School Education (N842)	0.5	0.1	-71.7	0.6	0.3	-57.9
Horticulture and Fruit Growing (A011)	2.4	1.0	-59.9	1.6	0.7	-56.5
Grain Sheep and Beef Farming (A012)	0.7	0.6	-22.6	0.7	0.4	-44.7
Meat and Meat Product Manufacturing (C211)	2.0	1.0	-50.1	2.1	1.2	-40.1
Community Care Services (O872)	1.2	0.2	-79.6	1.0	0.3	-67.5
Supermarkets and Grocery Stores (G511)	2.0	3.4	65.6	2.1	4.8	131.0
Fruit and Vegetable Processing (C213)	3.3	1.6	-51.6	4.0	1.4	-63.9
Services to Agriculture (A021)	4.4	1.7	-61.3	2.9	1.4	-52.5
Hospitals and Nursing Homes (O861)	0.6	0.3	-59.7	0.9	0.3	-61.7
Government Administration (M811)	0.5	0.3	-47.5	0.9	0.5	-39.8
Building Construction (E411)	1.4	1.4	-2.6	1.9	1.4	-25.2
Cafes and Restaurants (H573)	8.3	7.2	-13.4	10.5	7.2	-31.9
Other Health Services (O863)	0.4	0.2	-45.1	0.9	0.4	-61.8
Motor Vehicle Services (G532)	3.9	1.5	-61.9	5.0	1.9	-61.3
Specialised Food Retailing (G512)	5.1	4.4	-14.1	5.7	4.7	-18.5
Other Business Services (L786)	1.2	0.7	-44.2	1.9	1.1	-40.6
Marketing and Business Management Services (L785)	2.3	0.6	-75.3	2.1	0.9	-57.3
Other Personal and Household Good Retailing (G525)	1.8	1.2	-32.0	1.9	1.5	-23.9
Hawke's Bay Total Employed Labour Force	**1.8**	**0.9**	**-49.0**	**2.0**	**1.12**	**-45.4**

Source: Stats NZ Customised Database,

Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15 Years and Over, 1996, 2001, 2006

Appendices

Appendix 1.0: Population Size and Growth, Hastings District & Total New Zealand 1986-2011

Hastings District	Census Night Resident Population and Census-Adjusted Intercensal Estimates (March Years)	Census Night Resident Population (unadjusted for Census 1996) (March Years)	Estimated Usual Resident Population (June Years)		Change (%)	Total New Zealand Change (%)
1986	64,371	...	...			
1987	64,400	...	...	1986-87	...	...
1988	64,400	...	...	1987-88	0.0	0.3
1989	64,500	...	...	1988-89	0.0	0.7
1990	64,500	...	...	1989-90	0.2	0.2
1991	...	64,693	...	1990-91	...	...
1992	...	64,800	...	1991-92	0.2	1.0
1993	...	65,300	...	1992-93	0.8	1.3
1994	...	65,700	...	1993-94	0.6	1.4
1995	...	66,000	...	1994-95	0.5	1.6
1996	...	...	68,100	1995-96		
1997	...	...	68,600	1996-97	0.7	1.3
1998	...	...	68,900	1997-98	0.4	0.9
1999	...	...	69,000	1998-99	0.1	0.5
2000	...	...	69,300	1999-2000	0.4	0.6
2001	...	...	69,600	2000-01	0.4	0.6
2002	...	...	70,400	2001-02	1.1	1.8
2003	...	...	71,100	2002-03	1.0	2.0
2004	...	...	71,900	2003-04	1.1	1.5
2005	...	...	72,400	2004-05	0.7	1.1
2006	...	...	73,200	2005-06	1.1	1.2
2007	...	...	73,600	2006-07	0.5	1.0
2008	...	...	73,900	2007-08	0.4	1.0
2009	...	...	74,300	2008-09	0.5	1.1
2010	...	...	75,100	2009-10	1.1	1.2
2011	...	...	75,500	2010-11	0.5	0.9

Source: Statistics New Zealand Infoshare, Tables DPE006AA; DPE051AA

Notes: Changes in the timing and method of estimating Resident Population between 1991-1992 and 1995-1996 mean that the three sets of trends should be understood as discontinuous

Appendix 2.1: Components of Change by age (Hastings 1996-2001)

Actual and Expected Population by Age, 1996-2001: Hastings District

	Actual (Observed) 1996	Expected 2001	Actual (Observed) 2001	Actual (Observed) change 1996-2001	Change due to migration	Change due to Deaths	Change to cohort size	Actual (Observed) change (1996-2001)	Change due to migration~	Change due to Deaths~	Change to cohort size~
				Number					Percentage		
0-4	5,800	5,466	5,570	**-230**	104	-37	-297	**-4.0**	1.8	-0.6	-5.1
5-9	6,060	5,791	5,920	**-140**	129	-9	-260	**-2.3**	2.1	-0.1	-4.3
10-14	5,440	6,055	6,230	**790**	175	-5	620	**14.5**	3.2	-0.1	11.4
15-19	4,930	5,428	4,890	**-40**	-538	-12	510	**-0.8**	-10.9	-0.3	10.3
20-24	4,420	4,908	3,650	**-770**	-1,258	-22	510	**-17.4**	-28.5	-0.5	11.5
25-29	4,570	4,400	4,020	**-550**	-380	-20	-150	**-12.0**	-8.3	-0.4	-3.3
30-34	5,000	4,549	4,720	**-280**	171	-21	-430	**-5.6**	3.4	-0.4	-8.6
35-39	5,210	4,976	5,180	**-30**	204	-24	-210	**-0.6**	3.9	-0.5	-4.0
40-44	4,790	5,177	5,340	**550**	163	-33	420	**11.5**	3.4	-0.7	8.8
45-49	4,640	4,744	4,630	**-10**	-114	-46	150	**-0.2**	-2.5	-1.0	3.2
50-54	3,510	4,567	4,480	**970**	-87	-73	1,130	**27.6**	-2.5	-2.1	32.2
55-59	3,060	3,419	3,430	**370**	11	-91	450	**12.1**	0.4	-3.0	14.7
60-64	2,580	2,931	2,960	**380**	29	-129	480	**14.7**	1.1	-5.0	18.6
65-69	2,470	2,407	2,380	**-90**	-27	-173	110	**-3.6**	-1.1	-7.0	4.5
70-74	2,170	2,208	2,180	**10**	-28	-262	300	**0.5**	-1.3	-12.1	13.8
75-79	1,550	1,815	1,800	**250**	-15	-355	620	**16.1**	-1.0	-22.9	40.0
80-84	1,070	1,159	1,190	**120**	31	-391	480	**11.2**	2.9	-36.5	44.9
85-89	542	653	678	**136**	24	-417	528	**25.0**	4.5	-76.9	97.4
90+	228	296	302	**74**	6	-474	542	**32.7**	2.8	-208.0	237.9
Total	68,040	70,949	69,550	**1,510**	-1,399	-2594	5,503	**2.2**	-2.1	-3.8	8.1

Source: *Jackson/from Statistics New Zealand ERP and New Zealand Survivorship 1995-2007*

Notes: *~As a percentage of Previous Observed Population*

Appendix 2.2: Components of Change by age (Hastings 2001-2006)

Actual and Expected Population by Age, 2001-2006: Hastings District

	Actual (Observed) 2001	Expected 2006	Actual (Observed) 2006	Actual (Observed) change 2001-06	Change due to migration	Change due to Deaths	Change to cohort size	Actual (Observed) change (2001-2006)	Change due to migration~	Change due to Deaths~	Change to cohort size~
	Number							Percentage			
0-4	5,570	5,245	5,450	**-120**	205	-31	-294	**-2.2**	3.7	-0.6	-5.3
5-9	5,920	5,563	5,860	**-60**	297	-7	-350	**-1.0**	5.0	-0.1	-5.9
10-14	6,230	5,916	6,190	**-40**	274	-4	-310	**-0.6**	4.4	-0.1	-5.0
15-19	4,890	6,218	5,660	**770**	-558	-12	1,340	**15.7**	-11.4	-0.2	27.4
20-24	3,650	4,873	3,720	**70**	-1,153	-17	1,240	**1.9**	-31.6	-0.5	34.0
25-29	4,020	3,636	3,720	**-300**	84	-14	-370	**-7.5**	2.1	-0.3	-9.2
30-34	4,720	4,005	4,480	**-240**	475	-15	-700	**-5.1**	10.1	-0.3	-14.8
35-39	5,180	4,699	5,100	**-80**	401	-21	-460	**-1.5**	7.8	-0.4	-8.9
40-44	5,340	5,149	5,550	**210**	401	-31	-160	**3.9**	7.5	-0.6	-3.0
45-49	4,630	5,292	5,440	**810**	148	-48	710	**17.5**	3.2	-1.0	15.3
50-54	4,480	4,567	4,760	**280**	193	-63	150	**6.3**	4.3	-1.4	3.3
55-59	3,430	4,383	4,490	**1,060**	107	-97	1,050	**30.9**	3.1	-2.8	30.6
60-64	2,960	3,311	3,400	**440**	89	-119	470	**14.9**	3.0	-4.0	15.9
65-69	2,380	2,794	2,780	**400**	-14	-166	580	**16.8**	-0.6	-7.0	24.4
70-74	2,180	2,167	2,190	**10**	23	-213	200	**0.5**	1.0	-9.8	9.2
75-79	1,800	1,867	1,860	**60**	-7	-313	380	**3.3**	-0.4	-17.4	21.1
80-84	1,190	1,392	1,380	**190**	-12	-408	610	**16.0**	-1.0	-34.3	51.3
85-89	678	760	775	**97**	14	-430	512	**14.3**	2.1	-63.4	75.6
90+	302	396	375	**73**	-20	-584	678	**24.2**	-6.7	-193.3	224.2
Total	69,550	72,231	73,180	**3,630**	949	-2595	5,276	**5.2**	1.4	-3.7	7.6

Source: *Jackson/from Statistics New Zealand ERP and New Zealand Survivorship 1995-2007*

Notes: *~As a percentage of Previous Observed Population*

Appendix 2.3: Components of Change by age (Hawke's Bay RC 1996-2001)

Actual and Expected Population by Age, 1996-2001: Hawke's Bay Region

	Actual (Observed) 1996	Expected 2001	Actual (Observed) 2001	Actual (Observed) change 1996-2001	Change due to migration	Change due to Deaths	Change to cohort size	Actual (Observed) change (1996-2001)	Change due to migration~	Change due to Deaths~	Change to cohort size~
	Number							Percentage			
0-4	12,100	11,014	11,080	**-1,020**	66	-75	-1,011	**-8.4**	0.5	-0.6	-8.4
5-9	12,490	12,082	12,150	**-340**	68	-18	-390	**-2.7**	0.5	-0.1	-3.1
10-14	11,490	12,480	12,650	**1,160**	170	-10	1,000	**10.1**	1.5	-0.1	8.7
15-19	10,570	11,464	10,310	**-260**	-1,154	-26	920	**-2.5**	-10.9	-0.2	8.7
20-24	9,260	10,523	7,690	**-1,570**	-2,833	-47	1,310	**-17.0**	-30.6	-0.5	14.1
25-29	9,860	9,218	8,620	**-1,240**	-598	-42	-600	**-12.6**	-6.1	-0.4	-6.1
30-34	10,620	9,816	9,720	**-900**	-96	-44	-760	**-8.5**	-0.9	-0.4	-7.2
35-39	11,180	10,568	10,760	**-420**	192	-52	-560	**-3.8**	1.7	-0.5	-5.0
40-44	10,210	11,109	11,170	**960**	61	-71	970	**9.4**	0.6	-0.7	9.5
45-49	10,160	10,112	9,930	**-230**	-182	-98	50	**-2.3**	-1.8	-1.0	0.5
50-54	7,730	10,000	9,770	**2,040**	-230	-160	2,430	**26.4**	-3.0	-2.1	31.4
55-59	6,700	7,529	7,490	**790**	-39	-201	1,030	**11.8**	-0.6	-3.0	15.4
60-64	5,740	6,419	6,470	**730**	51	-281	960	**12.7**	0.9	-4.9	16.7
65-69	5,720	5,355	5,450	**-270**	95	-385	20	**-4.7**	1.7	-6.7	0.3
70-74	4,980	5,114	5,070	**90**	-44	-606	740	**1.8**	-0.9	-12.2	14.9
75-79	3,640	4,166	4,180	**540**	14	-814	1,340	**14.8**	0.4	-22.4	36.8
80-84	2,410	2,717	2,710	**300**	-7	-923	1,230	**12.4**	-0.3	-38.3	51.0
85-89	1,245	1,468	1,469	**225**	1	-942	1,165	**18.0**	0.1	-75.6	93.6
90+	525	682	651	**125**	-32	-1088	1,245	**23.9**	-6.0	-207.1	237.0
Total	146,630	151,835	147,340	**710**	-4,495	-5884	11,089	**0.5**	-3.1	-4.0	7.6

Source: *Jackson/from Statistics New Zealand ERP and New Zealand Survivorship 1995-2007*

Notes: *~As a percentage of Previous Observed Population*

Appendix 2.4: Components of Change by age (Hawke's Bay RC 2001-2006)

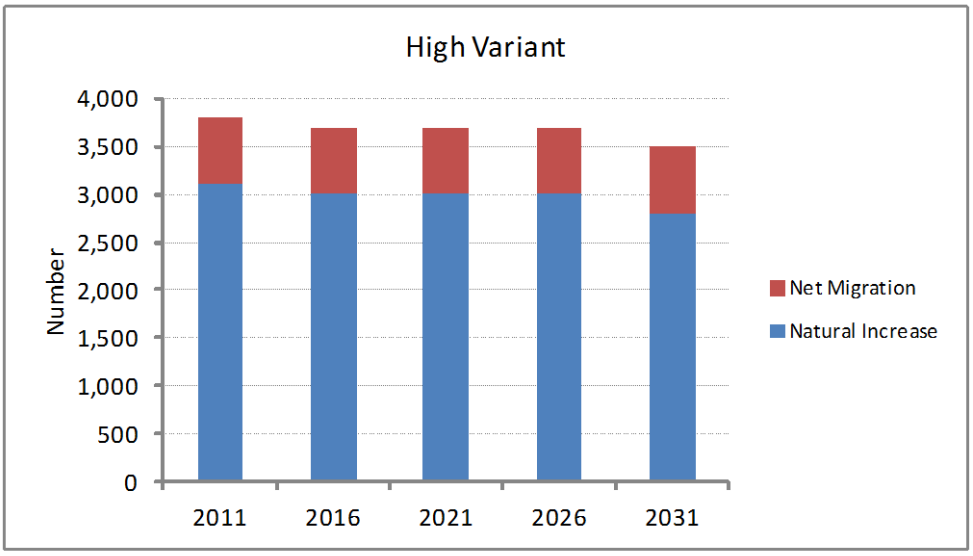
Actual and Expected Population by Age, 2001-2006: Hawke's Bay Region

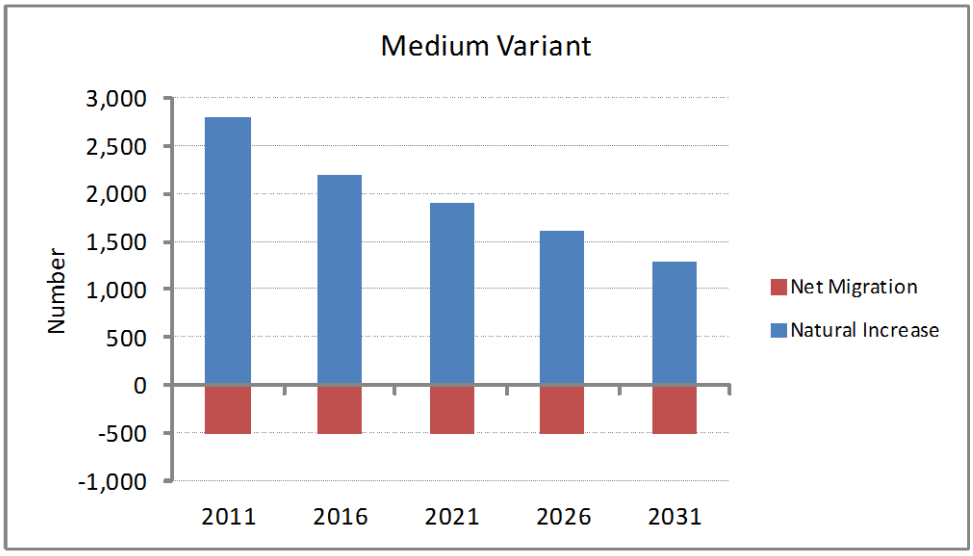
	Actual (Observed) 2001	Expected 2006	Actual (Observed) 2006	Actual (Observed) change 2001-06	Change due to migration	Change due to Deaths	Change to cohort size	Actual (Observed) change (2001-2006)	Change due to migration~	Change due to Deaths~	Change to cohort size~
	Number							Percentage			
0-4	11,080	10,508	10,790	**-290**	282	-61	-511	**-2.6**	2.5	-0.6	-4.6
5-9	12,150	11,066	11,480	**-670**	414	-14	-1,070	**-5.5**	3.4	-0.1	-8.8
10-14	12,650	12,141	12,370	**-280**	229	-9	-500	**-2.2**	1.8	-0.1	-4.0
15-19	10,310	12,626	11,380	**1,070**	-1,246	-24	2,340	**10.4**	-12.1	-0.2	22.7
20-24	7,690	10,273	7,800	**110**	-2,473	-37	2,620	**1.4**	-32.2	-0.5	34.1
25-29	8,620	7,661	7,830	**-790**	169	-29	-930	**-9.2**	2.0	-0.3	-10.8
30-34	9,720	8,587	9,310	**-410**	723	-33	-1,100	**-4.2**	7.4	-0.3	-11.3
35-39	10,760	9,676	10,370	**-390**	694	-44	-1,040	**-3.6**	6.5	-0.4	-9.7
40-44	11,170	10,695	11,400	**230**	705	-65	-410	**2.1**	6.3	-0.6	-3.7
45-49	9,930	11,070	11,190	**1,260**	120	-100	1,240	**12.7**	1.2	-1.0	12.5
50-54	9,770	9,795	9,990	**220**	195	-135	160	**2.3**	2.0	-1.4	1.6
55-59	7,490	9,558	9,780	**2,290**	222	-212	2,280	**30.6**	3.0	-2.8	30.4
60-64	6,470	7,228	7,400	**930**	172	-262	1,020	**14.4**	2.7	-4.0	15.8
65-69	5,450	6,108	6,180	**730**	72	-362	1,020	**13.4**	1.3	-6.6	18.7
70-74	5,070	4,962	4,980	**-90**	18	-488	380	**-1.8**	0.3	-9.6	7.5
75-79	4,180	4,342	4,290	**110**	-52	-728	890	**2.6**	-1.2	-17.4	21.3
80-84	2,710	3,230	3,100	**390**	-130	-950	1,470	**14.4**	-4.8	-35.0	54.2
85-89	1,469	1,727	1,658	**189**	-69	-983	1,241	**12.9**	-4.7	-66.9	84.4
90+	651	853	802	**151**	-51	-1267	1,469	**23.2**	-7.8	-194.8	225.9
Total	147,340	152,106	152,100	**4,760**	-6	-5803	10,569	**3.2**	0.0	-3.9	7.2

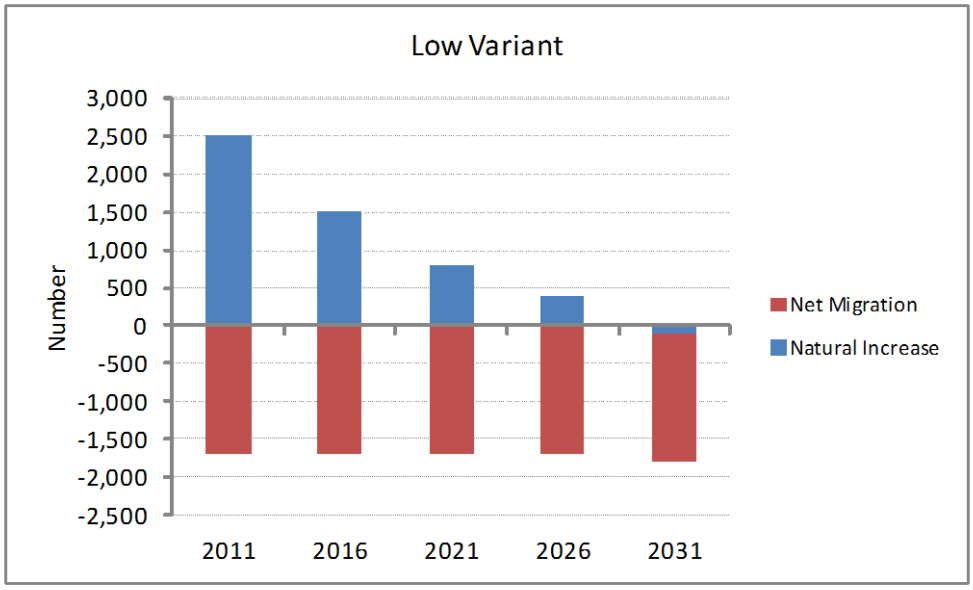
Source: *Jackson/from Statistics New Zealand ERP and New Zealand Survivorship 1995-2007*

Notes: *~As a percentage of Previous Observed Population*

Appendix 3.1: Projected Assumptions by Projection Variant, Hastings District







Source: Statistics NZ Subnational Projected Population Characteristics, 2006(base)-2031 Update

Appendix 3.2: Projection Assumptions by Variant and Region, Hastings District and Hawke's Bay RC

Hastings District	2011	2016	2021	2026	2031	2011-2031 (%)
HIGH						
Births (Live) - 5 years ended 30 June	5900	6000	6200	6400	6400	8.5
Deaths - 5 years ended 30 June	2800	2900	3100	3300	3600	28.6
Natural Increase - 5 years ended 30 June	3100	3000	3000	3000	2800	-9.7
Net Migration - 5 years ended 30 June	700	700	700	700	700	0.0
Population at 30 June	77000	80700	84400	88200	91700	19.1
Median Age (Years) at 30 June	37.5	38.1	38.4	38.9	39.9	6.4
MEDIUM						
Births (Live) - 5 years ended 30 June	5600	5300	5100	5100	5100	-8.9
Deaths - 5 years ended 30 June	2800	3000	3200	3500	3800	35.7
Natural Increase - 5 years ended 30 June	2800	2200	1900	1600	1300	-53.6
Net Migration - 5 years ended 30 June	-500	-500	-500	-500	-500	0.0
Population at 30 June	75500	77200	78600	79700	80500	6.6
Median Age (Years) at 30 June	37.9	39.2	40	40.7	41.8	10.3
LOW						
Births (Live) - 5 years ended 30 June	5400	4600	4200	4000	3800	-29.6
Deaths - 5 years ended 30 June	2900	3100	3400	3600	4000	37.9
Natural Increase - 5 years ended 30 June	2500	1500	800	400	-100	-104.0
Net Migration - 5 years ended 30 June	-1700	-1700	-1700	-1700	-1700	0.0
Population at 30 June	74000	73700	72900	71500	69700	-5.8
Median Age (Years) at 30 June	38.4	40.4	41.9	43.2	44.3	15.4

Source: Statistics NZ Subnational Projected Population Characteristics, 2006(base)-2031 Update

Hawke's Bay Region	2011	2016	2021	2026	2031	Change 2011-2031 (%)
HIGH						
Births (Live) - 5 years ended 30 June	11900	12000	12100	12300	12200	2.5
Deaths - 5 years ended 30 June	6100	6500	6800	7200	7800	27.9
Natural Increase - 5 years ended 30 June	5800	5500	5300	5100	4500	-22.4
Net Migration - 5 years ended 30 June	710	810	810	810	810	14.1
Population at 30 June	158600	164900	171100	176900	182200	14.9
Median Age (Years) at 30 June	38.5	39.3	39.7	40.2	41.1	6.8
MEDIUM						
Births (Live) - 5 years ended 30 June	11400	10600	10100	9800	9500	-16.7
Deaths - 5 years ended 30 June	6300	6600	7000	7500	8100	28.6
Natural Increase - 5 years ended 30 June	5200	3900	3000	2300	1400	-73.1
Net Migration - 5 years ended 30 June	-2000	-1900	-1900	-1900	-1900	-5.0
Population at 30 June	155300	157300	158400	158800	158300	1.9
Median Age (Years) at 30 June	39.0	40.4	41.3	42.2	43.2	10.8
LOW						
Births (Live) - 5 years ended 30 June	11000	9300	8200	7600	7100	-35.5
Deaths - 5 years ended 30 June	6400	6800	7300	7800	8400	31.3
Natural Increase - 5 years ended 30 June	4500	2400	900	-200	-1300	-128.9
Net Migration - 5 years ended 30 June	-4710	-4610	-4610	-4610	-4610	-2.1
Population at 30 June	151900	149700	146000	141300	135300	-10.9
Median Age (Years) at 30 June	39.4	41.5	43.3	44.8	46.2	17.3

Source: Statistics NZ Subnational Projected Population Characteristics, 2006(base)-2031 Update

Appendix 3.3: Projected Population, Hawke's Bay RC, 2006-2021 (Medium Series)

Hawke's Bay Region

	2006	**2011**	2016	2021	2026	2031	Change (%) 2011-2031
Numbers by age							
0-14	34,640	**33,830**	33,050	32,470	30,900	29,830	-11.8
15-24	19,180	**20,240**	19,120	17,620	17,710	17,610	-13.0
25-39	27,510	**25,550**	25,730	26,930	27,130	25,430	-0.5
40-54	32,580	**32,650**	30,970	27,990	26,090	26,350	-19.3
55-64	17,180	**19,360**	20,360	21,410	20,650	19,020	-1.8
65-74	11,160	**12,920**	16,000	18,040	19,110	20,170	56.1
75-84	7,390	**7,780**	8,680	10,240	12,840	14,580	87.4
85+	2,460	**2,940**	3,380	3,720	4,390	5,350	82.0
Total	152,100	**155,270**	157,290	158,420	158,820	158,340	2.0
65+	21,010	**23,640**	28,060	32,000	36,340	40,100	69.6

Intercensal Change by Age - Numbers							Change (N)
		2006-2011	2011-2016	2016-2021	2021-2026	2026-2031	2011-2031
0-14	...	**-810**	-780	-580	-1570	-1070	-4000
15-24	...	**1060**	-1120	-1500	90	-100	-2630
25-39	...	**-1960**	180	1200	200	-1700	-120
40-54	...	**70**	-1680	-2980	-1900	260	-6300
55-64	...	**2180**	1000	1050	-760	-1630	-340
65-74	...	**1760**	3080	2040	1070	1060	7250
75-84	...	**390**	900	1560	2600	1740	6800
85+	...	**480**	440	340	670	960	2410
Total	...	**3170**	2020	1130	400	-480	3070
65+		**2630**	4420	3940	4340	3760	16460

Age Distribution (percentage at each age)							Change (%)
	2006	**2011**	2016	2021	2026	2031	2011-2031
0-14	22.8	**21.8**	21.0	20.5	19.5	18.8	-13.5
15-24	12.6	**13.0**	12.2	11.1	11.2	11.1	-14.7
25-39	18.1	**16.5**	16.4	17.0	17.1	16.1	-2.4
40-54	21.4	**21.0**	19.7	17.7	16.4	16.6	-20.9
55-64	11.3	**12.5**	12.9	13.5	13.0	12.0	-3.7
65-74	7.3	**8.3**	10.2	11.4	12.0	12.7	53.1
75-84	4.9	**5.0**	5.5	6.5	8.1	9.2	83.8
85+	1.6	**1.9**	2.1	2.3	2.8	3.4	78.4
Total	100.0	**100.0**	100.0	100.0	100.0	100.0	...
65+	13.8	**15.2**	17.8	20.2	22.9	25.3	66.3

Summary measures							
	2006	**2011**	2016	2021	2026	2031	2011-2031
LM Entrants/Exits							
(15-24/55-64 years)	1.1	**1.0**	0.9	0.8	0.9	0.9	...
(20-29/60-69 years)	1.2	**1.0**	1.0	0.9	0.7	0.8	...
Elderly/Children	0.61	0.70	0.85	0.99	1.18	1.34	...
Reproductive (20-39 yrs)	23.2	22.4	22.0	22.1	21.7	21.2	...
65+	13.8	**15.2**	17.8	20.2	22.9	25.3	...
75+	6.5	**6.9**	7.7	8.8	10.8	12.6	...
Growth (%) - 5 years	...	**2.08**	1.30	0.72	0.25	-0.30	1.98
Annual average growth r	...	0.42	0.26	0.14	0.05	-0.06	0.10

Source: Statistics New Zealand, Subnational Population Projections by Age and Sex, 2006(base)-2031 Update

Appendix 3.4: Projected Population, Total New Zealand, 2006-2021 (Medium Series)

Total New Zealand

	2006	**2011**	2016	2021	2026	2031	Change (%) 2011-2031
Numbers by age							
0-14	888,320	**898,880**	917,400	936,520	928,840	928,020	3.2
15-24	604,740	**642,530**	631,120	611,040	635,720	656,930	2.2
25-39	858,960	**867,230**	915,380	977,760	992,370	977,670	12.7
40-54	891,290	**935,560**	924,010	886,920	888,330	935,510	0.0
55-64	429,670	**494,900**	544,530	593,920	602,570	578,610	16.9
65-74	275,700	**325,340**	397,410	458,230	507,220	555,350	70.7
75-84	177,780	**188,360**	214,970	257,970	320,330	372,710	97.9
85+	58,140	**72,560**	85,950	95,590	116,530	143,740	98.1
Total	4,184,600	**4,425,360**	4,630,770	4,817,950	4,991,910	5,148,540	16.3
65+	511,620	**586,260**	698,330	811,790	944,080	1,071,800	82.8

Intercensal Change by Age - Numbers							Change (N)
		2006-2011	2011-2016	2016-2021	2021-2026	2026-2031	2011-2031
0-14	…	**10560**	18520	19120	-7680	-820	29140
15-24	…	**37790**	-11410	-20080	24680	21210	14400
25-39	…	**8270**	48150	62380	14610	-14700	110440
40-54	…	**44270**	-11550	-37090	1410	47180	-50
55-64	…	**65230**	49630	49390	8650	-23960	83710
65-74	…	**49640**	72070	60820	48990	48130	230010
75-84	…	**10580**	26610	43000	62360	52380	184350
85+	…	**14420**	13390	9640	20940	27210	71180
Total	…	**240760**	205410	187180	173960	156630	723180
65+		**74640**	112070	113460	132290	127720	485540

Age Distribution (percentage at each age)							Change (%)
	2006	**2011**	2016	2021	2026	2031	2011-2031
0-14	21.2	**20.3**	19.8	19.4	18.6	18.0	-11.3
15-24	14.5	**14.5**	13.6	12.7	12.7	12.8	-12.1
25-39	20.5	**19.6**	19.8	20.3	19.9	19.0	-3.1
40-54	21.3	**21.1**	20.0	18.4	17.8	18.2	-14.1
55-64	10.3	**11.2**	11.8	12.3	12.1	11.2	0.5
65-74	6.6	**7.4**	8.6	9.5	10.2	10.8	46.7
75-84	4.2	**4.3**	4.6	5.4	6.4	7.2	70.1
85+	1.4	**1.6**	1.9	2.0	2.3	2.8	70.3
Total	100.0	**100.0**	100.0	100.0	100.0	100.0	…
65+	12.2	**13.2**	15.1	16.8	18.9	20.8	57.1

Summary measures							
	2006	**2011**	2016	2021	2026	2031	2011-2031
LM Entrants/Exits							
(15-24/55-64 years)	1.4	**1.3**	1.2	1.0	1.1	1.1	…
(20-29/60-69 years)	1.6	**1.5**	1.4	1.2	1.1	1.1	…
Elderly/Children	0.58	0.65	0.76	0.87	1.02	1.15	…
Reproductive (20-39 yrs)	27.5	26.9	26.9	26.8	26.1	25.5	…
65+	12.2	**13.2**	15.1	16.8	18.9	20.8	…
75+	5.6	**5.9**	6.5	7.3	8.8	10.0	…
Growth (%) - 5 years	…	**5.75**	4.64	4.04	3.61	3.14	16.34
Annual average growth r	…	1.15	0.93	0.81	0.72	0.63	0.82

Source: Statistics New Zealand, Subnational Population Projections by Age and Sex, 2006(base)-2031 Update

Appendix 3.5: Projected Population by Ethnic Group* and Broad Age Group, Hawke's Bay Region

Hawke's Bay region	Population[2, 3] by age group (years) at 30 June					Projected components of population change, five years ended 30 June					Median age[5] (years) at
	0–14	15–39	40–64	65+	All ages	Births	Deaths	Natural increase	Net migration	Inter-ethnic mobility[4]	
European/Other											
1996	27,400	40,200	34,900	17,400	119,900	...	...	...	...	...	35.8
2001	26,100	34,900	37,700	18,100	116,700	...	...	...	...	...	38.4
2006 (base)	25,400	34,600	41,400	19,300	120,700	...	...	...	...	...	40.2
2011	**25,000**	**32,800**	**43,000**	**21,500**	**122,200**	**8200**	**5200**	**3000**	**-1500**	**0**	**42.0**
2016	24,400	30,900	42,000	25,300	122,400	7400	5500	1900	-1700	0	44.0
2021	23,700	29,800	39,900	28,400	121,900	7000	5800	1200	-1700	0	45.7
Change 2011-2021 (%)	**-5.2**	**-9.1**	**-7.2**	**32.1**	**-0.2**	...	...	...	...	...	...
Māori											
1996	13,100	14,200	6,300	1,200	34,900	...	...	...	...	...	21.4
2001	13,400	13,700	7,100	1,400	35,500	...	...	...	...	...	21.7
2006 (base)	12,900	13,500	8,400	1,600	36,400	...	...	...	...	...	23.0
2011	**13,400**	**14,000**	**9,200**	**1,900**	**38,600**	**5200**	**1000**	**4200**	**-1500**	**-500**	**23.0**
2016	14,000	14,600	9,800	2,500	40,900	5000	1100	4000	-1200	-600	23.8
2021	14,500	15,200	10,000	3,100	42,900	5000	1200	3800	-1200	-600	24.8
Change 2011-2021 (%)	**8.2**	**8.6**	**8.7**	**63.2**	**11.1**	...	...	...	...	...	...
Pacific Islands											
1996	1,800	1,700	600	100	4,200	...	...	...	...	...	18.8
2001	2,200	2,100	900	100	5,300	...	...	...	...	...	19.6
2006 (base)	2,500	2,300	1,100	200	6,100	...	...	...	...	...	19.4
2011	**2,900**	**2,600**	**1,300**	**200**	**7,000**	**1200**	**100**	**1100**	**0**	**-100**	**18.9**
2016	3,400	3,000	1,500	200	8,100	1200	100	1100	0	-100	18.9
2021	3,800	3,400	1,600	300	9,200	1300	100	1200	0	-100	19.0
Change 2011-2021 (%)	**31.0**	**30.8**	**23.1**	**50.0**	**31.4**	...	...	...	...	...	...
Asian											
1996	700	1,200	600	100	2,600	...	...	...	...	...	28.5
2001	800	1,400	900	200	3,300	...	...	...	...	...	29.8
2006 (base)	1,000	1,600	1,000	200	3,900	...	...	...	...	...	29.3
2011	**1,200**	**1,900**	**1,200**	**300**	**4,600**	**500**	**100**	**400**	**300**	**0**	**29.3**
2016	1,500	2,200	1,300	400	5,300	600	100	500	300	0	30.0
2021	1,800	2,300	1,400	600	6,100	600	100	500	300	0	30.4
Change 2011-2021 (%)	**50.0**	**21.1**	**16.7**	**100.0**	**32.6**	...	...	...	...	...	...

Source: Statistics New Zealand, Subnational Ethnic Population Projections (2006 Base - 2009 Update) Tables 3e, 3m, 3p, 3a

(1) Boundaries at 30 June 2009.

(2) These projections have as a base the estimated resident population of each ethnicity, of each area, at 30 June 2006 and incorporate medium fertility, medium migration, medium mortality, and medium inter-ethnic mobility assumptions for each area. Population estimates for 1996–2006 are derived from the respective 1996–2006 census usually resident population counts.

(3) Numbers reflect the multiple count enumeration methodology and their sum is somewhat greater than the total projection for the TA. Projections are not available for all ethnic groups for all TA's.

(4) The net effect of people changing their ethnic identity.

(5) Half the population is younger, and half older, than this age.

Appendix 4.1: Average Age of Employed Labour Force by Employment Status, Hawke's Bay Region, 1996, 2001, 2006

	Hawke's Bay Region			Total New Zealand		
	Males	Females	Total	Males	Females	Total
1996						
Self Employed, no employee	46.9	44.8	46.2	45.1	43.6	44.7
Employer	46.5	44.7	46.1	45.4	43.8	44.9
Paid Employee	37.0	37.5	37.2	36.3	36.5	36.4
Unpaid Family Worker	46.2	44.0	44.9	44.9	42.4	43.4
Not elsewhere defined	37.5	39.2	38.3	37.9	39.2	38.5
Total	**39.4**	**38.7**	**39.1**	**38.7**	**37.7**	**38.3**
Number	34,080	28,140	62,220	890,043	740,769	1,630,812
2001						
Self Employed, no employee	49.2	47.1	48.5	47.4	45.7	46.8
Employer	48.8	46.8	48.2	47.4	45.8	46.9
Paid Employee	38.8	39.7	39.3	37.9	38.4	38.1
Unpaid Family Worker	49.2	46.1	47.4	46.0	44.8	45.3
Not elsewhere defined	39.9	43.8	41.6	40.4	43.2	41.7
Total	**41.4**	**40.9**	**41.2**	**40.5**	**39.7**	**40.1**
Number	34,527	29,472	63,999	923,001	804,321	1,727,322
2006						
Self Employed, no employee	50.8	48.2	49.9	48.7	46.9	48.1
Employer	49.5	47.8	49.0	48.3	46.8	47.9
Paid Employee	40.1	40.9	40.5	38.9	39.5	39.2
Unpaid Family Worker	52.1	47.7	49.4	48.3	46.9	47.5
Not elsewhere defined	42.2	46.2	44.1	42.3	45.9	43.9
Total	**42.7**	**42.2**	**42.4**	**41.5**	**40.8**	**41.2**
Number	38,706	34,446	73,152	1,049,526	936,006	1,985,532

Source: Stats NZ Customised Database,
Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15 Years and Over, 1996, 2001, 2006

Appendix 4.2: Average Age of Employed Labour Force by Employment Status, Hawke's Bay Region and Total NZ, 1996, 2001, 2006, School Education (N842)

	Hawke's Bay Region			Total New Zealand		
	Males	Females	Total	Males	Females	Total
1996						
Self Employed, no employee	32.5	50.0	44.2	47.5	44.7	45.5
Employer	37.5	…	37.5	45.0	45.0	45.0
Paid Employee	44.4	42.5	43.1	44.0	42.1	42.6
Unpaid Family Worker	…	…	…	22.5	25.0	24.2
Not elsewhere defined	…	37.5	37.5	38.6	39.0	38.8
Total	**44.4**	**42.5**	**43.0**	**44.0**	**42.1**	**42.6**
Number	843	2,127	2,970	17,481	46,722	64,203
2001						
Self Employed, no employee	50.3	48.7	49.2	49.2	46.8	47.6
Employer	…	46.5	46.5	46.3	46.3	46.3
Paid Employee	46.3	44.5	45.0	45.0	43.5	43.9
Unpaid Family Worker	…	41.9	41.9	44.0	42.7	43.0
Not elsewhere defined	50.0	46.3	47.5	49.3	46.6	47.4
Total	**46.4**	**44.6**	**45.1**	**45.2**	**43.6**	**44.0**
Number	930	2,484	3,414	19,638	57,549	77,187
2006						
Self Employed, no employee	47.2	47.5	47.4	50.5	48.0	48.9
Employer	…	49.2	49.2	49.8	44.6	45.9
Paid Employee	48.1	46.1	46.6	46.0	44.8	45.1
Unpaid Family Worker	…	…	…	41.1	46.0	44.6
Not elsewhere defined	70.0	52.5	55.4	46.6	47.0	46.9
Total	**48.2**	**46.2**	**46.7**	**46.1**	**44.8**	**45.1**
Number	885	2,583	3,468	19,476	61,254	80,730

Source: Stats NZ Customised Database,
Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15 Years and Over, 1996, 2001, 2006

Appendix 4.3: Average Age of Employed Labour Force by Employment Status, Hawke's Bay Region and Total NZ, 1996, 2001, 2006, Horticulture and Fruit Growing (A011)

	Hawke's Bay Region			Total New Zealand		
	Males	Females	Total	Males	Females	Total
1996						
Self Employed, no employee	49.4	46.4	48.5	50.0	47.9	49.2
Employer	48.1	47.9	48.1	47.6	46.5	47.2
Paid Employee	33.4	35.2	34.1	33.5	36.5	34.9
Unpaid Family Worker	49.9	48.2	49.0	47.4	45.5	46.3
Not elsewhere defined	34.6	38.0	36.1	36.1	38.3	37.0
Total	**37.6**	**38.1**	**37.8**	**39.8**	**40.3**	**40.0**
Number	2,895	1,854	4,749	16,161	12,768	28,929
2001						
Self Employed, no employee	49.6	48.4	49.2	52.3	50.2	51.5
Employer	51.0	49.6	50.6	50.4	49.0	49.9
Paid Employee	36.1	39.0	37.2	35.9	38.7	37.2
Unpaid Family Worker	48.6	48.8	48.7	48.9	47.8	48.3
Not elsewhere defined	43.4	37.8	40.6	40.8	42.3	41.5
Total	**39.9**	**41.3**	**40.5**	**42.0**	**42.5**	**42.2**
Number	2,253	1,368	3,621	15,192	11,709	26,901
2006						
Self Employed, no employee	53.6	52.0	53.1	54.9	52.2	53.8
Employer	53.4	51.0	52.8	52.2	51.3	51.9
Paid Employee	39.2	39.9	39.4	39.3	40.9	40.0
Unpaid Family Worker	55.1	51.1	52.7	53.4	51.8	52.5
Not elsewhere defined	40.4	41.1	40.8	45.0	44.1	44.6
Total	**42.7**	**42.2**	**42.5**	**44.5**	**44.4**	**44.5**
Number	1,899	1,185	3,084	13,317	10,458	23,775

Source: Stats NZ Customised Database,
Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15 Years and Over, 1996, 2001, 2006

Appendix 4.4: Average Age of Employed Labour Force by Employment Status, Hawke's Bay Region and Total NZ, 1996, 2001, 2006, Grain, Sheep and Beef Cattle Farming Growing (A012)

	Hawke's Bay Region			Total New Zealand		
	Males	Females	Total	Males	Females	Total
1996						
Self Employed, no employee	49.1	47.7	48.8	49.1	47.8	48.8
Employer	50.1	49.4	50.0	49.0	47.5	48.7
Paid Employee	37.0	38.9	37.4	35.6	38.2	36.2
Unpaid Family Worker	46.4	44.1	45.1	47.0	44.2	45.4
Not elsewhere defined	42.1	42.5	42.2	45.5	45.6	45.6
Total	**43.4**	**43.6**	**43.5**	**44.2**	**44.2**	**44.2**
Number	2,007	792	2,799	27,864	13,434	41,298
2001						
Self Employed, no employee	51.5	50.4	51.2	51.7	50.4	51.3
Employer	51.2	50.1	50.9	50.4	49.6	50.2
Paid Employee	38.5	40.2	38.9	37.0	39.8	37.7
Unpaid Family Worker	49.9	48.3	48.9	49.4	47.4	48.3
Not elsewhere defined	49.5	42.5	48.3	50.4	53.2	51.4
Total	**45.4**	**46.7**	**45.8**	**46.2**	**47.0**	**46.4**
Number	1,896	777	2,673	24,933	11,694	36,627
2006						
Self Employed, no employee	52.9	53.2	53.0	53.8	52.5	53.4
Employer	53.1	52.3	53.0	52.0	50.9	51.8
Paid Employee	39.0	40.5	39.3	39.0	40.2	39.3
Unpaid Family Worker	52.6	49.8	51.0	52.7	49.9	51.1
Not elsewhere defined	43.5	55.0	48.6	50.9	53.8	51.9
Total	**46.0**	**47.8**	**46.5**	**48.0**	**48.5**	**48.2**
Number	2,199	837	3,036	26,169	12,444	38,613

Source: Stats NZ Customised Database,
Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15 Years and Over, 1996, 2001, 2006

Appendix 4.5: Average Age of Employed Labour Force by Employment Status, Hawke's Bay Region and Total NZ, 1996, 2001, 2006, Meat and Meat Product Manufacturing (C211)

	Hawke's Bay Region			Total New Zealand		
	Males	Females	Total	Males	Females	Total
1996						
Self Employed, no employee	32.5	…	32.5	45.5	45.0	45.4
Employer	48.8	…	48.8	44.9	43.3	44.5
Paid Employee	38.3	36.9	38.0	38.0	35.5	37.6
Unpaid Family Worker	70.0	27.5	48.8	44.2	32.5	40.8
Not elsewhere defined	36.4	38.3	37.2	35.7	33.7	35.3
Total	**38.4**	**36.9**	**38.0**	**38.2**	**35.6**	**37.7**
Number	1,722	603	2,325	16,779	3,981	20,760
2001						
Self Employed, no employee	46.5	37.5	44.4	46.1	43.9	45.7
Employer	47.5	42.5	46.3	48.7	47.4	48.4
Paid Employee	39.9	38.2	39.4	39.6	37.5	39.1
Unpaid Family Worker	…	…	…	54.4	30.0	46.3
Not elsewhere defined	41.6	…	41.6	41.5	40.2	41.2
Total	**40.1**	**38.2**	**39.6**	**39.8**	**37.7**	**39.4**
Number	1,692	705	2,397	16,890	4,764	21,654
2006						
Self Employed, no employee	52.8	30.0	49.0	49.0	45.5	48.5
Employer	55.0	50.8	53.2	50.2	46.1	49.3
Paid Employee	40.9	40.7	40.8	40.6	38.7	40.1
Unpaid Family Worker	70.0	…	70.0	49.4	43.5	47.1
Not elsewhere defined	44.2	27.5	41.8	39.7	36.9	38.8
Total	**41.3**	**40.7**	**41.1**	**40.9**	**38.8**	**40.3**
Number	1,689	771	2,460	15,723	5,760	21,483

Source: Stats NZ Customised Database,
Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15 Years and Over, 1996, 2001, 2006

Appendix 4.6: Average Age of Employed Labour Force by Employment Status, Hawke's Bay Region and Total NZ, 1996, 2001, 2006, Community Care Services (O872)

	Hawke's Bay Region			Total New Zealand		
	Males	Females	Total	Males	Females	Total
1996						
Self Employed, no employee	…	38.3	38.3	51.0	45.7	47.3
Employer	54.2	46.1	48.5	49.9	47.3	48.4
Paid Employee	42.2	40.8	41.0	41.3	41.0	41.1
Unpaid Family Worker	40.8	50.0	44.5	43.0	42.5	42.7
Not elsewhere defined	38.8	38.0	38.2	37.4	39.7	39.4
Total	**42.5**	**40.9**	**41.1**	**42.2**	**41.2**	**41.3**
Number	171	984	1,155	3,546	22,644	26,190
2001						
Self Employed, no employee	55.0	45.0	47.5	50.9	48.1	48.8
Employer	61.3	55.0	56.8	52.4	49.0	50.4
Paid Employee	47.2	45.3	45.5	43.9	44.0	44.0
Unpaid Family Worker	17.5	47.5	32.5	48.8	45.3	46.6
Not elsewhere defined	50.0	42.5	45.0	44.5	45.5	45.2
Total	**47.8**	**45.3**	**45.6**	**44.8**	**44.2**	**44.3**
Number	201	1,524	1,725	5,436	31,770	37,206
2006						
Self Employed, no employee	45.8	50.7	49.5	52.5	49.6	50.3
Employer	58.3	58.0	58.1	53.3	50.4	51.6
Paid Employee	47.0	47.4	47.3	45.2	46.3	46.1
Unpaid Family Worker	57.5	47.5	52.5	44.6	46.6	45.9
Not elsewhere defined	47.5	53.3	50.4	43.8	48.5	47.5
Total	**47.4**	**47.6**	**47.6**	**46.0**	**46.5**	**46.4**
Number	270	1,629	1,899	6,483	36,783	43,266

Source: Stats NZ Customised Database,
Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15 Years and Over, 1996, 2001, 2006

Appendix 4.7: Average Age of Employed Persons in Industries Employing over 1,000 persons, Hawke's Bay Region and Total New Zealand, 1996 and 2006

	Hawke's Bay Region			Total New Zealand		
	1996	2006	Change (%)	1996	2006	Change (%)
School Education (N842)	43.0	46.7	8.5	42.6	45.1	5.9
Horticulture and Fruit Growing (A011)	37.8	42.5	12.5	40.0	44.5	11.1
Grain Sheep and Beef Farming (A012)	43.5	46.5	7.0	44.2	48.2	9.0
Meat and Meat Product Manufacturing (C211)	38.0	41.1	8.1	37.7	40.3	7.0
Community Care Services (O872)	41.1	47.6	15.7	41.3	46.4	12.3
Supermarkets and Grocery Stores (G511)	30.6	34.6	13.3	29.2	33.1	13.3
Fruit and Vegetable Processing (C213)	36.2	39.1	7.8	35.8	39.6	10.8
Services to Agriculture (A021)	34.9	39.9	14.3	36.6	40.9	11.8
Hospitals and Nursing Homes (O861)	41.5	45.0	8.6	40.3	44.2	9.8
Government Administration (M811)	41.4	45.6	10.2	40.2	42.7	6.2
Building Construction (E411)	39.7	40.3	1.5	38.0	39.7	4.3
Cafes and Restaurants (H573)	31.7	31.8	0.2	30.7	31.7	3.2
Other Health Services (O863)	43.2	46.2	7.1	40.8	44.5	8.9
Motor Vehicle Services (G532)	35.2	39.8	13.1	34.6	38.5	11.2
Specialised Food Retailing (G512)	33.5	34.3	2.3	33.5	33.9	1.1
Other Business Services (L786)	40.5	43.7	7.7	38.1	40.6	6.5
Marketing and Business Management Services (L785)	39.0	42.8	9.6	37.9	41.1	8.3
Other Personal and Household Good Retailing (G525)	39.7	41.3	4.2	38.6	40.4	4.7
Hawke's Bay Total Employed Labour Force	**39.1**	**42.4**	**8.7**	**38.3**	**41.2**	**7.6**

Source: Stats NZ Customised Database,

Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15 Years and Over, 1996, 2001, 2006

References

Jackson, N.O. (2011) The demographic forces shaping New Zealand's future. What population ageing [really] means, *NIDEA Working Papers* No. 1, National Institute of Demographic and Economic Analysis, University of Waikato, Hamilton.

Statistics New Zealand (2010) Technical Notes, Subnational Population Projections, http://www.stats.govt.nz/browse_for_stats/population/estimates_and_projections/SubnationalPopulationProjections_HOTP2031/Technical%20Notes.aspx

Statistics New Zealand (2010) Technical Notes, Ethnic Population Projections, http://www.stats.govt.nz/tools_and_services/tools/TableBuilder/population-projections-tables.aspx